SURVIVING EXTREME EVENTS

A Guide to Help Small Businesses and Not-for-Profit Organizations Prepare for and Recover from Extreme Events.

by Daniel J. Alesch and James N. Holly

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As always, any shortcomings in the document are the sole responsibility of the authors. We do our best, but no matter how hard we rake, we never get every leaf.

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INTRODUCTION

INTRODUCTION

Chapter 1 | **ABOUT THIS GUIDE**

This guide focuses on how owners of small businesses and managers of not-for-profit organizations can increase the chances that their organizations will survive extreme events such as natural hazards, willful acts of destruction, and large accidents. *It is intended as a resource for those who instruct and advise owners of small businesses and managers of not-for-profit organizations.* At the same time, for the owner or manager of a smaller organization who takes the time to read this guide, it will provide critical insights on how to survive a disaster.

This document is different in several ways from other "how to do it" manuals having to do with business recovery following a disaster. First, we do not start with the premise that reopening a business or not-for-profit organization as quickly as possible after the event is the best, or even a good, idea. Sometimes, not reopening at all will make the most sense. Second, we don't define survival or success as continuation of the business as it was before the event. Sometimes, success does mean reopening a business that flourishes in the aftermath of the disaster. Sometimes, success means recovering some or all of the business's equity following the disaster and moving on to something else. Success and survival are defined differently for each individual. Finally, the recommendations we make flow directly from almost a decade of listening carefully to owners and managers of small organizations, all across the country, following a variety of disasters.

We studied the effects of real disasters on real people and real organizations, learned the differences between those who survived and those who did not, and converted what we learned into lessons on how to survive. We believe that too much currently available advice is based on what someone who doesn't know much about small business and has never suffered through a disaster thinks ought to be done. The advice in this document comes from hundreds of small business and not-for-profit owners and managers who lived through a significant event and, even years later, cannot forget what happened to them and what they might have done differently. We sincerely hope that owners and managers of smaller organizations can use this guide to increase the chances that their organizations will survive an extreme event and become reestablished.

WHAT IS RECOVERY?

Organizational recovery following an extreme event is not well understood. Recovery processes, apart from reconstruction and the like, are difficult to visualize. We (the writers) view recovery as being made up of cyclic phases that must be dealt with iteratively, rather than a linear process with a time-line and trajectory. Recovery also involves continual planning and mitigation to prepare for the next possible extreme event.

A review of the related literature reveals a recurring cycle that begins with planning and mitigation, continues through survival and recovery, and returns once more to planning and mitigation under the aegis of lessons learned, preparedness, and reconstruction

Are there any alternatives to this cycle? What might they be? Yes, there are very likely alternatives to this cycle, based on clues found in the disaster literature. With perseverance, effort, and imagination we can discover and identify these alternatives.

We must find ways to plan for those things that can be managed, mitigate those things that can be mitigated, and learn to deal with the consequences of things unmitigated and unplanned. We must develop an essential, in-depth understanding of disaster recovery.

In their article "Recovery after Disaster: Achieving Sustainable Development, Mitigation and Equity" Berke, Kartez and Wenger (1993) wrote:

> *Unfortunately, the recovery phase is the least investigated and most poorly understood of the four phases of a disaster – mitigation, preparedness, response and recovery (Drabek, 1986; Ruben, 1991).*

Though there has been increased interest in "recovery" over the past ten years, it still is the least studied and understood phase of a disaster. Just what we mean when we use the term "recovery" has also been problematic in the research literature and in common usage.

> *Kates and Pijawka (in Chapter 1 of Hass, Kates, and Bowden (1977)) note the various labels that have been used for various periods following a disaster – restoration, recovery, rehabilitation, redevelopment, and reconstruction, among others . . . Among those with an interest in disaster research, but who bring differing perspectives to the definitions and terminology they use, are emergency managers, civil engineers, geologists, urban planners, public administrators, social workers, psychologists, sociologists, and political scientists, to name just the most commonly involved professions (Schwab, 1998).*

Reconstruction and sometimes long-term recovery are the two terms most often used to describe the period from weeks or months to four or five years following a disaster. Rubin (1986) characterized the long-term recovery process as

> *. . . the repair or reconstruction of buildings and structures; the evaluation of the existing building codes and land use regulations; and consideration (and implementation) of measures, both structural and nonstructural. Also included in this process are the planning and administrative activities and details, and identifying and securing the resources necessary to accomplish the recovery. Recovery encompasses all domains of community life: residential, business, public services and facilities, general population, and mitigation.*

For most researchers "long-term recovery" has been the task of reconstructing in a very literal sense. There are, however, other perspectives. Rolfe and Britton (1995) conclude

> *Recovery is a link in a chain of events, which can be helped by carefully planned policy at each stage at different points throughout the emergency management cycle; critical decisions are made, whether by design or default, that have important consequences . . .*

In her paper, "Disaster Recovery as a Social Process," Joanne M. Nigg (1995) argues that

> *. . . the sociological significance of what really transpires in the post disaster community is missed. Recovery is not merely an outcome, but rather it is a social process that begins prior to disaster impact and encompasses decision-making concerning restoration and reconstruction activities. It must also be recognized that what*

takes place during the aftermath of the disaster had its roots in the pre-disaster phases of response and recovery planning as well as mitigation implementation.

In our research, we found that recovery, whether short term or long term, is all this and more. It is physical, social, organizational, economic, and often extremely personal. Hill, Hill, and Gray (1985) describe the disaster stress syndrome as

. . . a reaction to any event which disturbs the status quo of an individual or community. It contains both the physical and psychological manifestations, which begin when disaster initially looms. The next stage is that of alarm when stress reactions intensify, and vague anxiety turns into more focused feelings of fear, often accompanied by agitation and irritability.

They go on to describe responses expected and often experienced when the disaster occurs and in its aftermath.

With impact, there may be a stunned response, quite short in duration, followed by increased agitation and problem solving activity. Increased heart rate and breathing, dilated pupils, sweating and cooled clammy skin are common. Emotionally, people may react with fear, high anxiety, depression, anger, guilt, fantasy, and personal identification with those affected.

Post impact, resources are mobilized, some helping behaviors are working and people feel charged, excited, powerful and in control. Their minds and bodies are in a heightened state of excitement and activity, but this soon changes as activity diminishes to a state characterized by disillusionment, being depressed, overwhelmed, full of grief and loss, and feeling confused and bewildered.

Recovery is much more than bricks and mortar, building codes, and political decisions. Recovery is an encompassing experience for each individual facing the consequences of disaster.

OUR MOTIVATION: A PROLOGUE

No one ever thinks it will happen to them, but, every year, thousands of small businesses and not-for-profit organizations face ruin because of a flood, tornado, fire, hurricane, earthquake, industrial accident, or willful or mindless act of destruction. Too often, the extreme event results in bankruptcy for the firm and a financial and emotional nightmare for the owner and his or her family.

One of the most unnerving facts is that it isn't necessary for a firm to suffer any physical damage whatsoever for the disaster to ruin the business. If the organization's customers or suppliers take large losses, the results are often the same as if the business is itself destroyed.

One of the most unnerving facts is that it isn't necessary for a firm to suffer any physical damage whatsoever for the disaster to ruin the business. If the organization's customers or suppliers take large losses, the results are often the same as if the place of business is itself destroyed.

Every year since 1995, we have visited disaster sites and talked with people who owned a small business or managed a not-for-profit organization at the time an extreme event occurred in their city or town. We have been able to talk with some of these people several times over the years after the extreme event. We spoke with others only once or twice. We visited some disaster sites as many as six times, beginning only a few months after the event and stretching out to eight years after it. We visited some sites as late as a decade after the event and others only a few months after the dust began to settle. We visited cities and neighborhoods that had been flattened by hurricane, inundated by flood, toppled by earthquakes, torn asunder by tornado, and swept by wildfire. We talked at length with those who survived and flourished and with those who lost loved ones, their business, and their home.

After only a few interviews, we began to understand the extent of the intense, long-term emotional and psychological impacts of these events on owners and their families. Sadly, the effects seem never to go away completely. The consequences for businesses, employees, families, and owners can last for years.

The more we spoke with those who suffered through extreme events, trying to hold home and business together, the more those people and their stories affected us. We started our work focusing on the financial and economic impacts of small business failures following extreme events, but the human side of the story became ever more important. We came to understand the extraordinary anguish that accompanies having one's business slowly bleed to death. Our focus became learning how to help small business owners and not-for-profit managers by developing -- from their experiences -- sensible, cost-effective protection before the event and effective strategies after the event to help reduce unnecessary, painful suffering while trying to deal with the consequences.

It is difficult for us to communicate to others the deep and lasting emotional impact on us of the disaster victims with whom we talked. Over the eight years during which we talked with people who suffered long-term effects of one or more natural disasters, we have, to some extent, shared their pain. We have included, below, brief vignettes of a few victims to help illustrate why we think what we are doing is worthwhile. We've changed the names and paraphrased respondents to maintain their anonymity.

Two years after a flood: As we began talking with the woman in her late thirties at her new place of employment, we could tell that she was reliving the flood and all that had passed in the years since then. Her daycare center had been flooded. Cleaning the mud, removing the mold, and repairing the center took a long time and, when it was done, the kids were attending other centers. Getting a new license proved onerous. During the most stressful period, her marriage unraveled because of the stress induced by the disaster. Tears welled up in her eyes and she began to sob uncontrollably. I hugged her and she cried hard into my shoulder for a long time. Her now-former husband was an emergency worker who had a hard time during the flood. "I should have been more supportive," she sobbed. "But I just had to get away from here and he had to face it all alone."

Three years after an earthquake: "In two weeks, the lease runs out. I'll close the business then. There isn't any money left. I used all our savings the last three years trying to make it work, but none of the new people in the area want to buy what I have to sell. I haven't told my wife yet how bad it is. You guys are the only people who know how bad it is; I've told you more than anyone else. I'm eligible for Social Security now and I can get a job at a fast food place. My wife will have to go back to work. We'll get by."

Four years after a flood: An elderly woman, who, with her husband, owned a clothing store, said to us, "His family's been in business here for more than a century. The flood kept us closed for a long time. We got the inventory dry-cleaned and are trying to sell it at low prices." Sales were obviously very slow. We were there for three hours on a Saturday and no one came in. "All we have left is this building and nobody wants to buy it. I don't know what we're going to do."

Two years after a flood: "My insurance agent said I didn't need flood insurance because I wasn't in the 100-year flood plain," he grimaced. "I lost over half a million dollars of uninsured inventory; that came out of my retirement money. I'm 63 and I had to take out a quarter million dollar SBA loan to buy new inventory. Now, they've got my house as collateral." "How is business now?" we queried. "Terrible. I need to gross $85,000 a month to break even, but, since the flood two years ago, I've averaged only $60,000." "What do you think you will do?" "My daddy and granddaddy would turn over in their graves if I went bankrupt. I guess I'll just keep doing what I'm doing."

Three years after a flood: They held on tightly to one another, tears streaming down their faces, telling us that he had attempted suicide more than once. He was getting psychiatric treatment now. Together, they were getting counseling. We were at their shop while they rearranged inventory for the last of their 'going out of business' sale. "It won't be so bad," he said, tears welling in his eyes. "I've got a job at the local food processing plant cleaning restrooms. We'll get by."

When we talked with business people a year or more after the disaster they had experienced, in almost every case, they could recall a great deal of detail about when the disaster struck. Everyone we talked with was willing and able to recount their business-related experiences in the months and years that followed the disaster; sometimes they talked for hours. The themes and lessons derived from these discussions have been previously reported (***Organizations at Risk: What Happens When Small Businesses and Not-for-Profits Encounter Natural Disasters***, Alesch, Holly, Mittler and Nagy, 2001) and are merely highlighted in this report. The themes represent recurring elements of the stories we heard from people in various businesses: people who experienced different kinds of disaster, and people in a variety of communities and geographical locations.

Few of the people we talked with ever had seriously considered the likelihood of a disaster and how it might affect their lives, relationships, and livelihoods. And when we questioned them months and years after the disaster event, most of the very same business people we previously interviewed told us they had done little or nothing to prepare their business for the next disaster. When we asked, "What do you do differently now to prepare for an earthquake (flood, hurricane, tornado . . .)?" the answer more often than not was "What can I do?"

We did find some business owners who learned from their experience and took specific actions to decrease their vulnerability to future disasters. However, we did not find very many small business people with systematic, integrated, or comprehensive approaches to reducing their vulnerability to disaster.

> Few of the people we talked with ever had seriously considered the likelihood of a disaster and how it might affect their lives.

The most common reasons for this inaction were: This was a once in a 100 year happening; it won't happen again. I can't afford the insurance. I can't afford to do much (anything). If it's going to happen, it's going to happen. Often people turned to us and asked, "What should I do?" At the time, we could tell them what other people had done to protect inventory or their facilities and equipment, but we seldom had the answers they wanted. Telling them our research was being conducted to discover what small businesses can and should do to reduce their vulnerability was seldom a satisfactory response, even though most were more than willing to contribute to our research.

We listened carefully to business owners and operators as they told us about their experiences with disasters before, during, and after the event. By assessing what we heard and observed, we have discerned implications for action, and, thus, feel confident in the recommendations made in this guide.

USING THESE MATERIALS

Both authors were faculty members in professional undergraduate and graduate programs for many years, and have extensive experience working with, counseling, and training small business owners. We each owned and operated our own small businesses. This, we think, helps us understand the needs of both instructors and small business clients. We know how important it is to fashion materials and curricula to match the needs and desires of a specific group of people who are in a particular place at a particular time. Therefore, we have not devised in this guide a defined curriculum for the instructor. Instead, we have prepared this guide to provide the instructor with necessary background and with information he or she may wish to use when working with people who own or manage smaller organizations.

Many trainers like to provide checklists to their students and, typically, students look for "something to take away from the session;" checklists sometimes satisfy that desire. We have not, however, provided much in the way of checklists in this document. Our focus is on helping the reader understand what to do, based on empirical analysis of why businesses fail or succeed following extreme events.

We have divided the document into more or less "bite-sized" sections to make a complex subject a little easier to absorb and digest. This chapter is simply an introduction. Chapters 2 through 5 relate, in summary fashion, the work we've conducted and on which we have based this publication. They describe how we did the research, describe our basic conclusions, address fundamental issues of survival and what is usually called "recovery," and provide a technical background for our findings. Chapters 6 through 10 provide the meat of the report. That section is centered on providing action guidelines for small organizations for what to do before, during, and after an extreme event to help ensure survival. The last section is made up of a set of study cases based on the experiences of real business people with whom we talked. ◆

SUBSTANTIVE INFORMATION FOR TRAINERS AND ADVISORS

Chapter 2 | OUR RESEARCH APPROACH IN A NUTSHELL

The research on which our recommendations are based is summarized here. Much of what is reported here was learned after we completed our first technical report for the Public Entity Risk Institute (Alesch, Holly, et al, 2001). Those who have read the first report, ***Organizations at Risk: What Happens When Small Businesses and Not-for-Profits Encounter Natural Disasters***, will find some of the material here repetitive. We decided that this report should be able to essentially stand-alone, so, while we apologize to those who read the first report, we ask that you bear with us in this section. For those of you who have not read the first technical report, it includes a far more detailed description of research methods and findings. It remains available on PERI's Web site at www.riskinstitute.org.

THE RESEARCH APPROACH

Our basic research strategy was to interview literally hundreds of owners and operators of small organizations, both profit-seeking and not-for-profit, who experienced significant natural hazard events in their communities. Over the course of eight years, we visited each of these people at their place of business (or elsewhere if necessary) and listened to them, sometimes for much more than an hour, while they related their experiences during and after the disaster. We were able to visit about twenty of the victims every year for four years following one specific disaster. We continue to interview a few business people from that group even eight and nine years after the first interviews.

We began our analysis with observations from each case and built upward to our understanding of failure and survival. Initially, our work was exploratory. As it progressed, we added nuances to our basic understandings. We used qualitative methods to code what people told us and, subsequently, we used quantitative methods to evaluate the data further.

SITES AND ORGANIZATIONS SELECTED FOR STUDY

We selected disaster sites for our research that met three criteria:

- First, we wanted to include victims of several types of natural hazards; we were able to include earthquake, hurricane, river flooding, wildfire, and tornado victims.

- Second, it was important to us that we have a broad geographical representation, so we conducted research in California, Florida, Georgia, Minnesota, New Mexico, North Carolina, and North Dakota.
- Third, while rebuilding sometimes goes quite quickly, recovery is quite another matter. To the extent that it occurs in organizations, neighborhoods, and public institutions following a major event, it takes place over years, not months. Therefore, it was important for us to visit those who suffered through disasters recently and some years before; we selected sites ranging from Hurricane Andrew (Florida, 1992) to the Cerro Grande Fire (New Mexico, 2000).

Where practical, we conducted interviews in two or more adjoining or nearby communities that experienced losses from the same event. The reason for this was to obtain information about organizations operating in jurisdictions that might have adopted different recovery strategies for the same natural hazard event. Only in this way could we begin to isolate the effects, if any, of alternative strategies on the recovery of small organizations.

Previous research suggests that the recovery experiences for individual firms might be different for organizations in various economic sectors (Alesch, 1996a, 1996b, 1996c; Dahlhamer and Tierney, 1996; Holly, 1997). We were also interested in the recovery of not-for-profit organizations. Therefore, we interviewed owners and operators of organizations engaged in different kinds of economic and community service activities. We sought interviews with a variety of businesses, including retailers, wholesalers, manufacturers, and service providers. We sought not-for-profit organizations including museums, tourist attractions, social service organizations, and YMCAs.

At each site, we interviewed city managers, mayors, disaster officials, housing officers, planners, economic development staff, and others to obtain background on the community and the disaster. They confirmed the location of damage, extent of damage, infrastructure damage, and other effects of the event. They also gave us useful leads for subsequent interviews. We interviewed people from other organizations as well to get background to guide our data gathering. These included newspapers, banks and other financial institutions, Chambers of Commerce, and so forth.

THE ANALYSIS

The primary question driving our research was "What differentiates smaller businesses that survive and recover from natural hazard events from those that do not?"

It is important to know what distinguishes survivors if we are to give useful advice to those who hope to be survivors. Early in our work, the research project became oriented toward discovery. We talked with and, especially, listened to small business owners who had experienced the disaster first hand. Discovering what they found important and hearing what they had to say, with minimal prompting, was important to us in identifying and understanding their individual "recovery process. "With knowledge of what individuals found important, what they did and did not do, and how they felt about what they did and were still doing, we anticipated finding themes, categories, patterns, and relationships. We further expected that, in developing this knowledge, important variables, processes, and practical methods would emerge, evolve, and prove explanatory and useful in various conditions and circumstances.

We used themes that emerged from this process to develop a set of variables that appear relevant to business recovery. During subsequent interviews, we used follow-up questions to establish how important these variables were to the informant if he or she did not spontaneously bring up the information.

We also looked for responses that did not fit entirely into existing categories. This process provided the opportunity to develop and test new themes during subsequent interviews and use our field notes to test for relevance in earlier interviews. Interviews continued to be unstructured, but, as themes emerged, we structured questions to test for relevance.

We then applied three quantitative analysis techniques to our data to help triangulate our findings and to determine whether the variables we identified as important to organizational survival were statistically significant. We wanted to learn the extent to which we could, quantitatively, distinguish organizations that survived from those that did not. The techniques we employed were cluster, discriminant, and regression analysis. We knew that, at least in the case of discriminant and regression analysis, our qualitative data did not comply with the scaling standards demanded by purists for those algorithms. We also knew, however, that the methods are quite robust and that the underlying assumptions concerning the data can be pressed quite far and still yield useful results. ◆

Chapter 3 | **FINDINGS AND CONCLUSIONS**

EXTREME EVENTS HAVE TIME LINES AND TRAJECTORIES

Each kind of disaster has its own time line and "trajectory." Hurricanes have different time lines and trajectories than do earthquakes, and both are different from a human-caused event. Even within each kind of disaster, each event has unique characteristics. Yet, despite all the differences, we found significant commonalities across types of disasters in terms of their effects on small organizations. These commonalities make it possible for us to give what we think is solid advice on how small profit-seeking and not-for-profit organizations can survive extreme events.

Disaster Time Lines

Each disaster is unique, but they generally share some common stages:

- risk awareness,
- warning times for the specific event,
- how fast or slowly the event occurs and recedes, and
- the amount of time required to repair or replace physical artifacts.

While the disaster time-line can be viewed as a continuum, it is the nature of individual disasters that typically most attention is focused on one specific segment of the time-line. Perhaps it is the early warning of the disaster, or the event itself, or the suspension of emergency activities. This "high stress" segment of the disaster time-line provides the public dimension of a disaster and focuses attention on short-term priorities and activities: protecting life, equipment, product, facilities; restoring utilities and infrastructure; providing food, clothing, and shelter; maintaining law and order; and doing all the things needed for a community to "recover" from a disaster. However, we found that what happens before and after the "high-stress" segment is frequently critical to the survival of many small businesses.

The high-stress time-line segment occurs immediately before, during, and after the disaster. Some disasters strike with little if any warning. Others disasters can be anticipated for hours, sometimes for a day or longer. With warning, there are some things one can do to prepare for the disaster's arrival. In addition, there are things one can and should do, in general, to prepare for the eventuality of any disaster.

Nearly every story we listened to started with the events immediately preceding or immediately following the disaster. Only in retrospect, after telling their memory of the destruction, frustration, helplessness, helping, sometimes pain, sometimes hope, did the people we talked with think about what they had done before any hint of the impending disaster. Only in retrospect did people think about what they might have done to reduce their vulnerability and, then, often only with prompting. Even then, they often rationalized their prior inaction – forgetting about the likelihood of another disaster.

Disaster Trajectories

We learned that the trajectory of a disaster is different from its time line. The trajectory has to do with the way in which a disaster unfolds. Trajectory is a consequence of the outcome of contingent events, many of which typically were not even contemplated before the event occurred. Illustratively, a terrorist attack on the World Trade Center could be anticipated after the first attempt on February 26, 1993. Few, however, expected that hijacked airliners, filled with fuel, would be crashed into the buildings. Fewer still expected the two towers to collapse following the explosions and fires. The trajectory of each event is unique, although the set of contingent events for each kind of extreme event can be approximated based on previous or simulated experience. That is, volcanic eruptions have certain contingent events associated with them: the magnitude of associated explosion, the nature of the discharge (ash, gas, cinders, or flowing lava), volume of discharge, direction of discharge, and so forth. Similarly, we can identify most of the uncertainties associated with a hurricane: wind speed, ground speed, associated storm surge, size, associated moisture content, duration over land, and direction of travel.

> Even though we can identify many or most of the contingencies associated with any class of extreme event, we are usually unable to know, in advance, the outcomes of the multitude of chance events associated with each exterme event.

Even though we can identify many or most of the contingencies associated with any class of extreme event, we are usually unable to know, in advance, the outcomes of the multitude of chance events associated with each extreme event. "If we had only known the towers would collapse…" "If we had only known the levee would be overtopped . . ." "If we had only known the flood would come from the uphill side…" "If we had only known that so many people would move from the area forever and be replaced by different kinds of people…"

The fact is that, most of the time, we act as though we know what is going to happen with considerable certainty. Engineers and physical scientists like to tell us that we face "uncertainty" and "risk." The reality is, however, that we all spend most of our time dominated by ignorance – ignorance of what will happen, when it will happen, and how it will unfold. That makes disaster planning, at least in the traditional sense, difficult and sometimes futile.

> *Edgecombe County Manager Joe Durham remembers his primary concern when floodwaters rose around the county was the potential for lost lives… The first 24 hours of Hurricane Floyd, Durham said, "weren't that bad." It was the next day, when the waters rose and covered 35 percent of the county to catch residents unprepared, that doubt and worry set in… The county had an emergency disaster plan in place, but Hurricane Floyd proved to be such a powerfully destructive force that even the most finely tuned preparedness wasn't quite enough . . . "The problem with the storm, was that everybody's piece of the plan became much larger," said Durham. "It was crisis management to the Nth degree" (Daily Southerner, 1999a).*

TRADITIONAL PRECAUTIONS: NECESSARY, BUT NOT SUFFICIENT

Traditional precautions mandated by state and local governments against extreme events are rarely aimed at helping to ensure that businesses survive. Building codes, for example, are intended primarily to prevent injury and death from structural collapse, fire, or other calamities sometimes triggered by extreme events. A second purpose is to reduce losses to structures and the contents. These are, of course, important priorities. Taking precautions to achieve reasonable goals associated with averting premature death and loss of physical assets makes sense. We believe those traditional precautions are necessary, but not sufficient for business survival. Indeed, they are not intended to ensure the post-event viability of the individual firm. That, typically, is viewed as the responsibility of the firm itself. Often, business owners look to insurance as the primary precaution against potentially devastating events. Many have unreasonable expectations that the government will bail them out.

We have learned, however, that traditional precautions, like stronger buildings and adequate insurance, are not enough to ensure post-event business viability. Businesses do not have to receive any physical damage to be put out of business by an extreme event. (As we explain later in this report, businesses can fail as a direct result of an earthquake, flood, or terrorist attack for any of several reasons.) Nor does insurance provide assurance that the business will survive. Insurance can protect the owner's equity, but cannot ensure the post-event viability of the business enterprise.

We have learned that business owners must go beyond traditional mitigation measures to help ensure that they will survive financially following an extreme event. We have coined a phrase, *Management Mitigation*, to embrace the actions and mind-sets that are essential for survival.

RECOVERY AND SURVIVAL MEAN DIFFERENT THINGS TO DIFFERENT PEOPLE

The term "recovery" is used extensively in relation to disasters. In the very immediate aftermath of an extreme event, the word is used to describe the activities of emergency workers who rescue those who survived and find the bodies of those who did not. For those of us who focus our attention on the full disaster cycle, recovery means something different. Members of the disaster community talk about mitigation, preparedness, response, and recovery as stages in addressing extreme events. The term "recovery" is part of the litany. It has to do with trying to regain some semblance of normalcy in the weeks, months, and years following the disaster.

In that context, recovery often implies a return to the ***status quo ex ante*** – that is, a return to conditions as they were before the event. Indeed, return to the ***status quo*** before the event is inherent in the legislation authorizing post-disaster assistance to individuals and to local government. We think most people who have not experienced an extreme event "close up and personal" think of them as a "bump in the road" – a jolt that temporarily upsets the equilibrium. In that context, for an engineer, recovery may mean getting electric power generation up to where it was before the event or getting the natural gas or water network back in operation to, perhaps, 90 per cent of customers. For urban planners, recovery may mean replacing destroyed buildings or completing a buyout program of flooded homes along the river. For municipal finance officers, recovery may mean reestablishing a property tax base that generates sufficient municipal tax revenue to make the municipality solvent. For most people looking in at the community from outside, we think recovery means achieving a status where there is no longer visual evidence of the natural disaster's physical effects.

We found that, when talking with one another, we were using different and multiple images of what constitutes recovery, confounding our communication and making the analysis more difficult. When we realized what was happening, we quickly agreed that recovery means much more than reconstructing buildings and landscape. We agreed, too, that, if recovery means return to the ***status quo ex ante***, that it doesn't occur following a large-scale extreme event. ***We agreed that small businesses and not-for-profit organizations do not "recover" in the sense of returning to what was before the event. Instead, they struggle to achieve viability in the new environment within which they exist, regardless of whether the owners and operators perceive themselves as being in a new environment.***

Initially, the goal is often a return to the old set of relationships and perceptions. However, a year or more after the event, owners and operators begin to reflect a new set of perceptions and expectations more in keeping with what has actually happened around them.

We learned that achieving post-event viability is rarely simple. Long after the physical evidence of the destruction is gone, long after new buildings are built, and long after the grass grows over scars in the land, the effects of the disaster remain. They remain as economic, social, and psychological wounds for those who suffered through the event. We have come to believe that, for organizations that suffer significant losses from a natural hazard event, return to the ***status*** *quo ex ante* is a chimera; an illusion that can never be achieved.

Natural disasters, of course, occur only when the forces of nature collide with the interests of man – only when people suffer perceived losses. It became easier for us to understand how things can never be brought back to what existed before after we interviewed the shopkeeper whose daughter was killed in the hurricane and others whose lives, years later, are still dominated by the events of a single tragic day.

A CRITICAL ELEMENT OF POST-EVENT VIABILITY:FIGURING OUT HOW TO COPE IN A CHANGED ENVIRONMENT

We learned that business owners and not-for-profit managers who flourish after a disaster created a post-event strategy that is effective in the new environment. Many of those who flourish simply stumble into the strategy without having consciously thought about it. Others, fewer in number by far, actually think the situation through. They somehow perceive the critical changes that are taking place in the community and business environment and convert that understanding into some fairly simple steps to help ensure organizational viability.

The fundamental lesson is simple. Recovery does not follow disaster as day follows night. Recovery requires that the business person adapt to new, post-event realities. Doing the same old thing after the event works only if you, your customers, and your suppliers suffered little or no property, inventory, or psychological damage.

We have come to believe, based on our interviews, that the set of demographic, social, and economic linkages that actually define a community are changed irreparably by a major natural hazard event. Not every officially designated disaster results in major irreparable changes to communities. Some so-called disasters simply are not sufficiently encompassing to have significant effects on the community system, even though individuals do suffer harm from them. For large events, like Hurricane Andrew in south Dade County and the 1994 earthquake in Northridge and in concentrated areas of Santa Monica and other smaller communities, there is no going back to what was. The term "recovery" is unfortunate to the extent that it implies a return to what was.

It is less of a problem if one talks about return to some acceptable version of normality. It is usually even more useful to talk about surviving the event and achieving some acceptable level of viability in a new context. What we believe happens after a major natural hazard event is that most individuals, organizations, and communities gradually grasp and adapt to the new realities within which they exist, changing perceptions, expectations, and, consequently, behaviors. The extent to which the individuals, organizations, and communities become viable in the new environmental context is largely a function of how well they adapt to the new circumstances – of how well they "morph" to a new system state as the relationships in their environment change.

Similarly, survival and post-event success are defined personally and contextually. Survival may be viewed as simply being alive following the event. It may mean getting back on track to where one was headed before the event. It can mean making a living and getting along reasonably well. ***In this document, we talk about survival as making it through the event with enough personal capacity and financial wherewithal to achieve personal and financial viability in the post-event environment***. It does not necessarily mean reopening the same business and having it do well. Opening a new business in a new location means successful "recovery" to us. So does liquidating the business to recapture owner equity and changing occupations. ◆

Chapter 4 | **HOW DISASTERS PUT SMALL ORGANIZATIONS OUT OF BUSINESS**

Natural hazard events, willful acts of destruction, and large accidents create financial ruin for small businesses and not-for-profit organizations in many ways. It may be surprising to learn that an organization can fail even if it does not suffer any physical damage. The best way to learn how to protect a business or not-for-profit organization from being ruined by an extreme event is to learn how they put people out of business. In this section, we describe how disasters ruin small firms.

We worked to identify ***the key variables that affect the extent to which small businesses and not-for-profit organizations can attain long-term viability following a natural disaster***. Five variables came to light from our research. We think they are central to determining whether a small business or not-for-profit will survive and, over some longer period, become viable. These variables are:

1. The extent to which customers or clientele are affected adversely by the event.
2. The extent to which the customers' need for the organization's products or services can be deferred, substituted for, or acquired elsewhere without significant increases in transaction costs.
3. The major trends in the industry in which the organization does business and the posture of the individual organization with respect to those trends.
4. The extent to which the business or not-for-profit organization loses critical production, inventory, or capital assets.
5. The extent to which the owner or operator recognizes changes in and adapts to the post-event market for goods and services.

At the beginning of our research, we thought that the scale of the disaster would be an important factor. That is, we theorized that modest events, such as the fire in Los Alamos, would have relatively little effect on the future of individual firms compared with larger-scale disasters, such as the effects of Hurricane Andrew on south Dade County, Florida. We still think that is true. We have come to believe, however, that the size of the disaster, up to some as-yet-unknown point, is reflected in other variables we have identified, including the effects on customers and the losses suffered by the individual organization.

LOSS OF CUSTOMERS

A small business that experiences a disaster can fail if many of its customers move away from the area, or suffer losses and are either no longer able to buy the company's goods or services, or change their expenditure patterns and the business is unable to adapt.

We have talked at length with dozens of small businessmen and women who lost it all because most of their customers experienced significant losses from a flood, hurricane, or earthquake. When people lose much of what they possess, they don't have money to spend on new glasses, vacations, upscale restaurants, specialty shops, or anything other than what is required to feed and house the family and to try to get their lives back on firm footing.

A primary factor in differential recovery rates among economic sectors is largely a function of the effects of the disaster event on customers and clients. The customer effect can show up in any of several ways.

When a business cannot supply them, the customer goes elsewhere— If the business is damaged to the extent that it cannot reopen promptly or cannot meet its customers' needs from inventory, then customers who are either unwilling or unable to defer purchase will go somewhere else to get what they need.

When the customer loses purchasing power, a business suffers— A business or not-for-profit need not suffer damage in a natural hazard event to find itself in peril following the event. One reason manufacturing firms usually recover more quickly than do many kinds of retail or service firms is that their customer base tends to be more geographically diverse. Retail and service organizations with a geographically concentrated customer base suffer badly when the area is damaged or destroyed, even if the firm itself receives no damage.

When residential or commercial customers suffer extensive damage, they change their buying habits. To the extent that they have money or credit following the event, they buy what they need to survive and to get their homes or place of business repaired or rebuilt. Consequently, plywood, lumber, paint, and floor covering sales boom, at least for a while, and to the extent that those suffering damage have insurance coverage. Depending on the scale of the event, vendors from across the state and even from across the country descend on the stricken city to ply their wares to contractors repairing the damage.

On the other hand, while fast food restaurants may do well right after a disaster, many upscale restaurants do not. Specialty shops, "upscale" shops, do not do well. Retailers who depend on discretionary income for sales tend to do badly following events that have adverse effects on their residential customer bases. The reasons are a little involved, but consistent with our analysis and interpretation. In the case of earthquakes, even insured homeowners have extremely high deductibles – typically 10 percent of the entire value of the home – before payments kick in. Those owners become strapped for cash as they look for ways to meet the deductible. Even when owners are insured with low deductibles, as is usually the case in wind damage, they often decide to upgrade the home while repairing the damage. Consequently, much of their discretionary money goes toward upgrading the kitchen or bath or adding that extra bedroom.

When the customer moves away, the organization suffers — Following Hurricane Andrew, large numbers of people left south Dade County for other parts of Florida and other states. The closing of Homestead Air Force Base, which was permanently evacuated just hours before the hurricane struck, reduced the population of the area significantly. Moreover, the base closure removed families and individuals with reliable incomes and a set of skills needed in the community. Following the Air Force personnel and dependents, winter residents and retired people left in great numbers, never to return. Homestead is still there, but it is an entirely different place than it was before the hurricane a decade ago. Community demographics have changed dramatically. Businesses that did not adapt to the new reality did not survive.

People often show good sense, reasoning that if you do not have to live in a disaster-prone area, it makes sense to leave it. And they do. Tens of thousands appear to have left the Northridge, California and south Dade County, Florida, areas. Smaller, but still significant numbers moved away from Grand Forks, N.D. In every community we visited, we were told of people who simply moved away from the risk. Whenever that happens, local merchants and not-for-

> A business need not suffer damage in a natural hazard event to find itself in peril. When . . . customers suffer extensive damage, they change their buying habits.

profit organizations are faced with the prospect of a decline in support. Even if those who move away are replaced by others, the smaller organization is faced with the challenge of turning the new population into customers and patrons. In many of the communities we visited, people with lower incomes and less education replaced those who moved away. This, of course, may change the climate for a business serving higher-income customers.

When the customers can find substitutes or other suppliers — Assuming a firm has some down time following the event, and other things being equal, an organization is less likely to survive the event and become viable again if its customers can easily meet their needs for the product or service somewhere else and if customer loyalty is low. There is also a lower probability of recovery if other products can be readily substituted for the firm's products. Finally, there is a lower probability of recovery if customer outlays for the firm's goods or services represent discretionary rather than essential expenditures.

CHARACTERISTICS OF THE INDUSTRY IN WHICH THE ORGANIZATION IS DOING BUSINESS AND THE ORGANIZATION'S POSITION WITHIN THAT INDUSTRY

Trend exacerbation. Natural hazard events appear to exacerbate existing trends in urban areas, hastening demographic changes and adding additional pressure for land use succession. Often, government planners seem slow to recognize those impacts and to act accordingly.

For more than a year before the earthquake, Northridge had been suffering a recession induced by cutbacks in defense expenditures. The recession affected area retailers adversely. In addition, the Northridge-Reseda area was already undergoing demographic changes when the earthquake occurred. The combination of the recession and the earthquake appear to have exacerbated neighborhood changes already underway. We expect to confirm observations from recently available Census data, but casual empiricism suggests that many white, middle-class defense industry employees, former employees, retirees, and others said, "enough is enough" and moved away from the layoffs and the shaking. They were replaced mostly by recently-arrived Hispanics and ethnic Koreans.

Grand Forks' central business district was hurting before the floods of 1997. Retail had been moving out toward the urban periphery along major highways. The same thing was happening in Montezuma, Georgia, prior to a serious flood, although the town is much smaller. This could be expected; that is the pattern being experienced in almost every small and middle-sized urban area in North America. Retail sales patterns have been changing dramatically in the United States; the old downtown shopping core is a thing of the past except in unusual circumstances. In both Grand Forks and Montezuma, however, after the floods, municipal governments opted to shovel sand against the tide, pouring money into the downtown areas, with little apparent effect on consumer behavior. Downtown Grand Forks remains relatively empty of retail outlets even today and, in downtown Montezuma, few of the merchants find being there very profitable.

Position on the curve— When we interviewed businesses, we tried to judge where they were on the industry curve. That is, we tried to assess whether the organization was in the forefront of location, product or service mix, marketing approaches, and innovation, or whether it was in the middle of the pack, or whether it was lagging behind. We believe that the firm's location on the industry curve is a good indicator of whether the firm can weather the aftermath of the disaster. Businesses forward of the middle of the industry curve do much better, on average, than firms that are lagging behind industry trends.

LOST ASSETS OFTEN MEAN RUIN

Although some businesses fail as a direct consequence of natural hazard events without suffering any damage at all, there is a higher probability of failure if the organization suffers extensive losses. We encountered firms that had essentially no damage, but that lost their customer base and were not able to recover. Recovery is even more difficult when an earthquake, flood, hurricane, or tornado damages or destroys a business's building, equipment, and inventory and also generates adverse effects on customers.

Small businesses and not-for-profit organizations often fail if the event destroys their assets, including their place of business, inventory, and/or production processes. If physical assets are not insured, ruin is much more likely. If the physical assets are insured, but the insurance company fails because it is overwhelmed by claims from the catastrophe, things get tougher. If the insurance company balks at the claim and it takes a long time to settle, it will probably be difficult for the small organization to stay in business. Ruin is even more likely if the firm does not have business interruption insurance and insurance against lost revenue following business interruption. Business interruption insurance, after all, pays only while the business must be closed. It does not cover losses in income after that period and such losses are extremely likely for most kinds of small businesses. It is critically important for small businesses and not-for-profit organizations to protect their base assets with insurance against a host of perils. Insurance will not guarantee that a firm will survive the event, but it will protect against loss of assets, thus offering the ability to make choices about what to do.

The horror stories of firms that were without insurance or that were under-insured are endless. For small business owners, who can see what could happen to them, the horror stories become the source of many bad dreams. Here's just one brief example. Charlie's company sold health care equipment to hospitals, nursing and convalescent homes, and individuals. His building was in the 500-year flood plain, so his insurance agent told him he did not need flood insurance. When we visited Charlie, the stains indicating the high water mark were twelve feet up the wall in his show room. He lost $500,000 in uninsured inventory. He wrote a check for that loss from his retirement fund. Then, he borrowed $250,000 from the SBA to get more inventory. It all took time. Competitors moved in. It has been a couple of years since the flood and Charlie still falls about $20,000 a month short of breaking even. He is nearing 65. His nest egg is gone and his business is failing. The chances of catching up are, at best, mighty slim.

The firm sometimes takes sufficient damage that, by the time it is back in the marketplace, the firm's customers have moved on to other businesses and the owner is unable to adapt. Ed was in the carpet business. The earthquake knocked off the back of his building and set off the sprinklers. Then it rained. Ed found himself the owner of hundreds of rolls of wet, muddy carpet – all uninsured. By the time he got a place with four walls, a floor, and a roof, carpet wholesalers and large retailers from out of area and from out of state had moved in, cut deals with builders, and captured the majority of the post-earthquake demand for new carpeting. When we first met Ed, he was surfing channels on the TV in his office, completely baffled as to what to do next. The next time we visited, he had given the store away and walked away from the business.

Other things being equal, we found, as one might expect, that organizations that were smaller, weaker, and under significant stress before the event were much more likely to fail after the event. Even strong firms can suffer badly from natural hazard events. Being out of business for any extended period can lead to a loss of market share.

FINANCIAL STRENGTH PRIOR TO THE EVENT

Other things being equal, we found, as one might expect, that organizations that were smaller, weaker, and under significant stress before the event were much more likely to fail after the event. Marginal firms and those tottering on the brink of failure often tumbled when the event struck, even if they suffered only peripheral damage. Sometimes the disaster is simply the straw that breaks the camel's back. It affords the owner with a good excuse to give up a losing battle, presumably because the organization would, in any circumstance, not have enough staying power during the long, difficult weeks that follow the event.

In our research, we found that many business people who had marginal enterprises before the natural hazard event did reopen. Consequently, they hung on through long, painful recovery periods, only to exhaust their resources before finally giving up.

Even strong firms can suffer badly from natural hazard events. Being out of business for any extended period can lead to a loss of market share. Even with business interruption and property and casualty insurance, it can be extremely difficult to regain market share.

OWNER/OPERATOR BUSINESS ACUMEN

Businesses often fail for the same reasons they succeed; the owners are often very single-minded. We have already noted the rather considerable psychological stress small business and not-for-profit managers experience during and following a damaging natural hazard event. Often, the event is a 360-degree phenomenon, involving home, family, livelihood, and self-esteem. For some, the strain is so great that they fail to reopen the business after the event. They simply melt away. Others show enormous stamina, struggling against the pressures and stress with a level of psychosocial resiliency at which one can only marvel. Often, unfortunately, the stress wins and the firm closes.

Against this backdrop of struggle and failure, we found individuals who were able to face business adversity and re-create organizations with true viability. A young man, faced with bankruptcy because of lack of customers, converted his auto repair business into a thriving business working on race cars. An optometrist assessed the adverse effects on his customer base and moved to a new location. A dry cleaner without customers saw the National Guard troops who were helping with the disaster cleanup as a built-in market and captured it by arranging to clean their uniforms. A young man with a shop that sold sewing machines reconceptualized his business. He turned it into a recreational service (sewing for creative recreation), inducing customers to buy new, expensive sewing machines. The wall coverings retailer walked away from leased property as soon as he concluded the building's owner could not act quickly enough for the retailer to salvage his business. He moved, reopened, and survived.

We believe that the single most important variable identified thus far in the survival equation is the extent to which the owner or operator recognizes and adapts to the post-event environment. After a real disaster, a community never returns to what it was before. The post-event environment is always different. Those who perceive the changes and respond appropriately have an excellent chance of surviving and becoming viable again. Those who continue to do business under the old paradigm, assuming that the community will return to pre-existing conditions, have all the cards stacked against their long-term survival. Doing what one did before will not work in changed circumstances.

The survivors seem to have an intuitive understanding of Ashby's Law of Requisite Variety. Ashby maintains that, to survive, a system must have a repertoire of responses at least equal to the array of environmental challenges. Only variety can deal with variety. Those who are affected adversely by the event and then flourish in the aftermath are those who can read the signs of the new environment and respond quickly and appropriately. ◆

Chapter 5 | **PREREQUISITES TO BUSINESSES TAKING ACTION**

It is important to understand why organizations do not take actions to reduce the adverse effects of extreme events if one is to fully understand how to overcome those obstacles. Specifically, it is important to understand the conditions necessary for organizations to choose to implement risk reduction and recovery measures.

Our work is influenced by Cohen, March and Olsen's "garbage can model" of organizational decision making (Cohen, March and Olsen, 1972). That model suggests that decisions are not made, nor is action taken, unless four independent streams come together simultaneously. The four consist of:

- a problem (about which there is general agreement within the organization),
- a solution to the problem (which is a credible solution for a critical mass of actors within the organization),
- space on the organizational agenda, and
- one or more persistent advocates for matching the available solution with the existing problem.

That model triggered us to think about what the prerequisites might be for successful adoption and implementation of risk reduction and recovery measures within an individual organization. The model was useful in previous work in which one of the authors, working with another colleague, attempted to understand why it took several municipalities in California so long to adopt retrofit ordinances for unreinforced masonry buildings (Alesch and Petak, 1986). Rather than simply adapt the model to a somewhat more complex problem and rather than begin building a new model from the ground up, it seemed helpful to augment the Cohen, March and Olsen model to help us gain further understanding.

Analysis suggests four fundamental organizational prerequisites for adoption and implementation of risk reduction and recovery measures. The four prerequisites are sequentially cumulative. The reason will become obvious to the reader.

- The first prerequisite for successful implementation is that the individual organization must perceive that it is at risk from the hazard. This equates to the Cohen, March and Olsen requirement that there be a recognized problem.

- Second, once the organization perceives itself at risk, it must also be convinced that an acceptable solution exists to reduce that risk. This prerequisite equates roughly with the Cohen, March and Olsen prerequisite for a solution, except that we do not require a solution. We require simply that the organization believes a solution with a good fit to its problem exists.
- Third, even if the organization perceives the risk and sees that an acceptable solution exists, the organization must conclude that implementing the risk reduction policies and practices is in its best interests at this time. It is here where we believe we have elaborated the Cohen, March and Olsen model to explicate both a temporal dimension and a proactive solution-seeking element.
- Finally, in addition to perceiving the risk, believing solutions exist, and having a solution that matches the organization's needs at this time, it is necessary that the organization has the capacity and the ability to implement the risk reduction measures at this time.

PREREQUISITE 1: THE ORGANIZATION MUST PERCEIVE ITSELF AT RISK

In the traditional model of risk assessment, one looks at the hazard, exposure, vulnerability, and probable losses from events of various sizes. For organizations to perceive themselves as having an earthquake problem, for example, the decision maker(s) must understand and accept that a credible earthquake hazard exists, that it is likely to occur within a relevant time frame, and that, should it occur, the organization will suffer more than trivial losses. The prudent mitigator from outside the organization should be concerned, therefore, with how organizations define the earthquake problem – how they perceive the risks they face in terms of exposure to the hazard, vulnerability, and the losses that are likely to result from an earthquake. We cannot expect organizations to take action unless they know the hazard exists and can relate that hazard to potential adverse effects for them.

Analysts have known for a long time that not much happens unless someone experiences some physical, financial, or emotional discontent and decides they want things to be better. Problems exist for individuals and organizations only when there is a difference between what the organization's policy makers desire and expect for the organization and their perception of the state of affairs in which they find or expect to find the organization. There has to be a disparity between the desired and perceived reality. Consequently, one shouldn't expect an organization to implement risk reduction behaviors unless a critical mass of decision makers in that organization is dissatisfied with its perceptions of the current or projected situation and decides that a problem exists.

Communicating the Risk

Every earthquake of consequence teaches scientists and engineers things they didn't know about earth movement and how this affects structures. If those who spend much of their time studying the phenomenon continue to be surprised at what they learn from each earthquake, what of the lay person who only thinks about earthquakes when they occur or when they watch some inaccurate, misleading, and fatuous motion picture depicting one? For people to take appropriate action, they must internalize information about the hazard that is relatively simple to understand and that is relatively consistent over time.

A second key element in risk perception and problem definition has to do with timing. Currently, scientists do not know enough to be able to predict earthquakes in anything but a geologic time frame. Lay people have a hard time understanding return periods and understanding that scientists don't know the location of all the faults that might generate earthquakes. Risk communicators have to learn how to say, "Large earthquakes are not low probability events; the probability of occurrence is nearly one. They are, however, rare in any given decade. That means the chances of one occurring in your neighborhood this year are pretty slim. You can bet the farm, however, that, some day, one will occur right where you are standing. Now, how lucky do you feel today?"

We've all had the experience of hearing someone say something like, "Thank God, I survived the hundred-year flood. I'm safe for another 99 years," or "We haven't had an earthquake here since 1812. It's just not going to happen in my lifetime." Even if one accepts the inevitability of a particular kind of extreme event, if the threat is not perceived as likely within one's relevant time frame, the salience of the risk is minimal because the individual or organization does not perceive a risk that justifies action.

And we've heard people say, "I live more than 10 miles from the San Andreas fault; we're safe from earthquakes here," even though California's most recent damaging earthquakes occurred on unmapped faults. And we have heard business owners sitting amidst ruined inventory and massive financial losses, teetering on the edge of ruin, say, "I didn't think I needed flood insurance. I'm in the 500-year flood plain." If individuals and organizations believe the event will not occur where they are, or do not believe that it will have effects on them, then they do not perceive a risk.

Those of us in the hazards business find it hard to believe that there are organizations in California and other dangerous places that do not understand the inevitability of medium and large earthquakes and the consequences for life and property. We have a tendency to believe they underestimate the risks to which they are exposed. Many of them believe we continually overestimate the risks.

It is also the case that we still don't know as much about the risks as we would like to know. We're still learning about the nature of the hazard, including the characteristics and expected magnitudes of ground motion and structural response. Even within the field, disseminating new knowledge takes some time; communicating new knowledge about the earthquake hazard to people who may or may not be interested in that information takes much more time. And, it is difficult to communicate risks in ways that people can understand. Hence, the challenges are, as we learn more, to move information more quickly and accurately from the science community to the lay community when the communication channels are already jam-packed. In short, we need to spend a lot more energy figuring out how to communicate the earthquake risk, for example, especially in areas where they are rare.

Perceptions of Exposure, Vulnerability, and Probable Consequences

It is not enough for vulnerable organizations to buy into the likelihood of an extreme event. Before an organization takes action to protect itself, the organization has to understand its exposure, vulnerability, and the likelihood of adverse consequences when the event occurs. There must be an expectation of loss.

Knowing that there will be damage from an extreme event is not the same as expecting adverse consequences from it. "Why ***did*** you have earthquake insurance on your business?" we asked a small businessman in the Northridge area. "I couldn't get the SBA loan without it," he replied matter-of-factly. "Why ***didn't*** you have earthquake insurance on your home?" I asked him, knowing that his house had been condemned following the event. "We thought the government would pay for our losses," he replied, just as matter-of-factly. "We were wrong."

Expectations of loss also depend on how much one has to lose. If your business is just hanging on and you do not have a lot to lose, then your definition of the problem is altered. Or, perhaps you just feel lucky. Or you may feel protected by one or another deity. Or, perhaps your internal calculus concerning the joint probability of occurrence, imminence, proximity, intensity, and consequent damage, just says to you that this is not something you have to be concerned with.

PREREQUISITE 2:
THE ORGANIZATION MUST BELIEVE IT CAN TAKE ACTION TO REDUCE THE RISK

Assuming that the key decision makers in the organization perceive the risks associated with extreme events, they will take precautions against the hazard only if they believe they can do something about it. There must be a perception that an acceptable solution to the problem exists. Otherwise, nothing will be done. A number of obstacles can keep a small business owner from believing he or she can take action.

The Decision Maker's Mindset

A fatalistic mindset is perhaps the most difficult obstacle to overcome when trying to stimulate risk-reducing behavior: "If it's going to happen, it's going to happen. It's God's will and there's nothing I can do about it." Some people have strong feelings of an external locus of control, while others believe in their own efficacy – that they are confident they can do something to alter what is otherwise likely to happen in the future.

A Slim or Unknown Inventory of Acceptable Risk Reducing Actions

A solution isn't a solution unless decision makers know it exists and believe that it will be effective within their organizational context. There are several perfectly valid reasons an organization might not be aware of workable solutions.

First, a solution may not yet exist. New problems, like steel welds breaking during earthquakes, continue to surface, often as side effects of employing new technologies. It took quite a while to come up with means to strengthen unreinforced masonry buildings that were sufficiently cost-effective for owners to employ.

Second, the actual inventory of workable solutions may be slim, or may be difficult or expensive or both.

Third, despite living in the age on instant communications and easily available information, disseminating innovations still takes time.

Intractable Problems

Some problems are perceived by organizations as intractable. When that happens, organizations sometimes simply stop seeking to understand them, much less continue efforts to find a solution to them.

Intractability, of course, varies from time to time and place to place. Intractability often has less to do with complexity than it has with being locked into a perceptual paradigm that keeps one from seeing familiar things in new ways – new ways of seeing things that make obvious a solution to a situation that was otherwise an enigma. So, what is intractable to some is not to others. Moreover, intractability changes to tractability with changes in the social, legal, or organizational environment. Sometimes it changes with the availability of new technologies. And, sometimes it changes when looked at by someone with a novel perspective. In any event, as long as an organization perceives a problem as intractable, little can be done to move it toward implementing a solution.

PREREQUISITE 3: THE ORGANIZATION MUST SEE THAT TAKING ACTION NOW IS IN ITS BEST INTERESTS

More than half a century ago, March and Simon created a simple, yet robust, model of organizational decision making to explain a set of choices (March and Simon, 1953). The model suggests that organizations seek alternatives to what they are doing when they are dissatisfied with the way things are going. They keep searching as long as they believe there is a decent solution out there somewhere that can be found for less than the cost of the search, or when they find an acceptable alternative, or when they come to believe they cannot do better than they are doing now. Organizations take action when a critical mass of decision makers believes either they or the organization will be better off taking the action now than either deferring the action or not taking any action.

Weighing Sure Costs Against Possible Benefits

Everyone and every organization has more ways to use resources than has the resources available. When given a choice of how to use those resources, most people are rational. That is, given their preferences and their perception of the probable payoffs from alternative courses of action to realize those preferences, they will, for the most part, spend appropriately. Some people and organizations are better than others in making good choices. Anheuser-Busch assessed the risks to its business in southern California and decided it made good sense to strengthen parts of its brewery against earthquakes. The mitigations were completed only about six months before the Northridge Earthquake. Prudent? Lucky?

Implementation problems for public policy occur when governments enact policies dictating that some specific risk reduction measures be taken by a class of organizations regardless of the calculus of individual organizations within that class concerning risk and potential payoff. Organizations will resist implementing those policies if their own estimates of the risks and payoffs and of relative priorities do not coincide with those of the governmental policy makers.

Public policy makers tend to concern themselves with aggregate measures of well-being. They care about events in which lots of buildings are damaged and the public has to bear great costs. Public policy makers are less likely to concern themselves with the judgments made by individual firms concerning the marginal utility of a dollar spent to reduce risk to the firm compared with the marginal utility of a dollar spent elsewhere. Often, businesses have different uses for money on matters of higher priority and more urgent concern.

Congruence with Organizational Culture, Goals, and Priorities

The individual firm's economic analysis of the financial benefits of reducing risks by employing one or another risk reduction technology is important, but only part of the story. Organizations do not implement policies unless those policies pass several tests. Not only must a proposed risk reduction policy make financial sense, it must also be congruent with organizational culture and values, not detract from attaining central goals, and fit in with organizational priorities. Culture, values, goals, and priorities are unique to specific organizations. Consequently, one size does not fit all – a risk reduction practice that makes lots of sense to one organization may be an anathema to another.

Matching Organizational Motivation

No single theory adequately explains variations in motivation. In general, contemporary motivation theory is based on a belief that individuals, and presumably organizations, respond to several kinds of needs or desires that typically extend beyond making money. Some organizations are motivated to do good, to fulfill personal needs of participants, or to have some other affect on organizational participants.

One may argue convincingly that organizations are motivated into courses of action when they expect adequate rewards for doing so. The greater the potential rewards, the greater the motivation, unless, of course, the means for following the path are beyond the ability of the organization.

PREREQUISITE 4: THE ORGANIZATION MUST BE CAPABLE OF IMPLEMENTING THE RISK REDUCTION MEASURES AT THIS TIME

Assuming the organization's key decision makers are aware of a threat, know there are measures they can take to reduce their risks substantially, and are convinced that it makes sense, the organization may still not implement risk reduction measures. In the competition of issues and ideas for time, reducing natural hazard risks may not reach the top of the organizational agenda. It may be because other issues continue to crowd it off the agenda, because the organization lacks the capacity to do what it perceives necessary, or because the environment within which the organization would attempt implementation is itself dysfunctional.

Space on the Organizational Agenda

"It's important, but we just have too much on our plate right now." How often have you heard or said that in the context of an organization faced with an array of important, urgent, and involved initiatives? Like individuals, organizations have to set priorities and must address issues based on some criteria concerning what comes first. Often, unfortunately, tactical concerns take time which may be better spent on strategic assessment, so risks from hazards perceived as having relatively low likelihood this week are pressed onto the back burner while today's emergency can be dealt with. Organizations with more resources are generally better able to devote resources to both today's problems and tomorrow's vision.

Organizational Capacity: Financial Considerations

Small businesses starting out, working to develop products and markets, usually try to keep overhead low. Newer, safer buildings usually cost more than older buildings that are not as safe. Usually, the choice is to go to the less costly building. The business may, in fact, be marginal, because it is just starting out or for other reasons; the cash that might be spent on risk reduction is needed for inventory or something else. It is usually only when organizations have a very high commitment to safety or are well established and profitable that they are willing to allocate sufficient resources to obtain space with substantial resistance to floods or earthquakes.

One size does not fit all -- a risk reduction practice that makes lots of sense to one organization may be anathema to another.

Moreover, insurance usually becomes expensive and hard to get in areas that have experienced disasters in the recent past. Sometimes, policies have onerous deductibles. Organizations have to make the choice between using scarce resources for building the business or for protecting it, maybe, against an extreme event that might happen within the next few years.

At a more basic level, insurance is often a poor means for achieving risk reduction. It won't keep the building from falling on you or your customers. It won't save inventory or equipment. Real protection may require redundancy, such as multiple geographic locations. It may require product or customer diversity. It may require some basic changes in how the organization does business. In short, real risk reduction may go far beyond buying insurance and moving to a safer building and may very well be beyond the capacity of the firm. In such instances, protection against catastrophic events may be viewed as beyond organizational financial capacity.

Organizational Capacity: Available Skills

Relatively few organizations employ risk managers. Fewer yet employ risk managers who know much of anything about risks associated with natural hazards; most are much more at home talking about product liability and the woes associated with workers' compensation. The professional services marketplace doesn't provide much help for the smaller organization.

Smaller organizations, especially, are not likely to have much knowledge about risk reduction, about natural hazards, or about how to ensure that appropriate risk reduction steps are taken. This is not to say that small business people are not imaginative. Research on changes in small business practices following the Northridge Earthquake found small business people using "folk base isolation" designs to keep glass cabinets upright during shaking, instituting just-in-time acquisition and shipping to reduce the exposure of manufactured products in their facilities, making sure that first aid kits were near the cash register instead of buried in the back room, and devising a host of self-help risk reduction methods. The point is that not everyone did take steps, but those who did could benefit from simplified guides as to the risks they face and things they can do to reduce those risks. Those things include a simplified guide to the risks associated with various kinds of structures.

Smaller organizations . . . are not likely to have much knowledge about risk reduction, about natural hazards, or about how to ensure that appropriate risk reduction steps are taken.

Concerns about organizational capacity are not limited to private organizations that ought to undertake risk reduction measures. Those concerns often extend to governmental building departments in both larger and smaller jurisdictions. Building departments are often understaffed. They are particularly likely to be understaffed when assigned additional tasks, such as implementing a new program aimed at reducing a specific risk in a large set of privately owned buildings. Not having the capacity may be as simple as not having enough inspectors to do the job within a reasonable time frame, but it can also mean not having the equipment or software or staff expertise to deal with especially complex cases.

The Organizational Environment

The environment, either within which a private organization attempts to reduce its natural hazard risk or within which a public organization attempts to implement a program to get those organizations to take action, is critically important to successful implementation. Organizational environments can range from placid and predictable to convoluted and chaotic.

When organizational environments are highly unpredictable and extremely complex, the chances of successful implementation diminish appreciably. In 1973, Pressman and Wildavsky concluded that "the multiplicity of participants and perspectives combined to produce a formidable obstacle course . . . When a program depends on so many actors, there are numerous possibilities for disagreement and delay . . . (G)iven a large number of clearance points manned by diverse and independent participants, the probability of a program achieving its goals is low" (Pressman and Wildavsky, 1973, pages 102-110). We agree. The probability of successful, timely implementation of natural hazard mitigation policies is inversely related with the complexity of the policy and implementation process, the number of actors participating in the process, the number of sign-offs required, and the diversity of interests and priorities among the actors.

Programs are more likely to be implemented effectively if the environment is generally supportive rather than openly hostile toward the program and its goals. Not all third-party involvement is collaborative. Often, third parties concerned with a policy are in considerable disagreement with one another concerning policy, and struggle to affect the outcome of governmental action. We agree with other observers that "policies are more likely to be implemented if they are "actively supported by organized constituency groups and by a few key legislators (or the chief executive) throughout" (Sabatier and Mazmanian, 1976). ◆

GUIDELINES FOR SMALL BUSINESS AND NOT-FOR-PROFIT OWNERS AND MANAGERS

GET ACCUSTOMED TO THE IDEA THAT IT CAN HAPPEN TO YOU

A recurring theme among almost all the owners and managers we interviewed was their general lack of concern about suffering losses from a natural hazard event right up to the time that it changed their lives unalterably. Only rarely did our respondents believe that "this could happen to me." Most of those who suffered losses to earthquake, hurricane, or tornado appear to have thought that the chances of their being a victim was extremely remote – sufficiently remote that they could largely ignore the phenomenon or simply buy insurance to deal with the losses should the event ever occur.

Those who were flooded out had tended to put their faith in technical fixes. Too often, we heard respondents tell us "there used to be floods here, but the Corps of Engineers built a levee and made it safe." Consequently, our respondents happily built homes and businesses in flood plains, ignoring the fact that levees can fail. And they ignored, as did the Corps, the fact that floods sometimes come overland, from a different direction than the main river channel.

Small business owners and small not-for-profit organizations are often accustomed to life on the edge of security. They typically have a small financial flywheel to keep them going should the cash flow stop. For every dollar that comes in, several high priorities make claims on it. No wonder it is often easier for the operator of a small organization to prefer to assume the organization is secure from the effects of natural hazards. In the pages that follow, we discuss some of the reasons we encountered for the illusion of security.

"I Thought I Was Covered" "The insurance agent said, 'I won't sell it (flood insurance) to you. You don't need it.' I believed him. Right! See that line near the ceiling. That's where the water crested."

"I told him I wanted the same coverage that I had with the other carrier. He told me I had exactly the same coverage. In fact, he had dropped earthquake insurance portion so he could come in at a lower premium and he never told me."

"The agent sold us the wrong kind of policy.

Consequently, none of our buildings were covered. We paid premiums all those years and got nothing."

"They told me I couldn't buy flood insurance because I wasn't in the 100 year flood plain, so here I am, no building, no inventory, and out of business."

"I was fully covered, but the insurance company defaulted after the hurricane. I got a dime on the dollar."

"I thought I had everything taken care of, but they said only my building was covered. I got nothing for the contents. Then they depreciated my building besides. People who didn't have flood insurance were far better off. They were bought out at full value and were eligible for other aid programs. What a rip-off!"

We have spoken with only a handful of respondents over the years who had adequate insurance to cover most of their losses from the extreme event that happened in their town. Most small business people we talked with were woefully under-insured or had the wrong kind of coverage.

Sometimes, the insurance agent inadvertently acts as an agent of disaster. The litany of complaints against insurance agents, insurance adjusters, insurance companies, and the National Flood Insurance Program is almost endless. Some of the complaints seemed to be clearly warranted. In other cases, it sounded to us as though people were trying to shift responsibility for bad decisions off themselves and on to others. In some cases, these complaints have been paraphrased, but they reflect fairly the sentiments of dozens of business owners from across the country who were trying to recover from the effects of natural hazard events.

Persistent belief in the technological fix—Despite endless evidence to the contrary, Americans maintain a steadfast belief in the technological fix and in the advice of experts who have a stake in their proposed solution. For example, once the Army Corps of Engineers builds a levee against the hundred year flood or a flood control dam, people put highly vulnerable buildings, equipment, and inventory into extremely hazardous locations with no thought to the fact that, every year, a dam fails somewhere or a levee is overtopped or fails.

In our investigations into more than half a dozen communities that experienced floods in the past five years, almost everyone who was flooded out maintained that they felt absolutely safe from floods.

What people do not understand is that 100-year flood maps are invariably erroneous. The flood plain changes whenever someone adds a building or a parking lot in it, when people upstream cut trees or fail to provide buffer strips, when the river changes course, and because the designation of what constitutes a 100-year flood changes through time.

They also seem to think that levees and dams are always placed in the correct locations to protect them from all floods. Along the Red River of the North, people now know better. Breckenridge, Minnesota was flooded because heavy rain and rapid melting of the snow pack came down from higher ground toward the town, not from the river, but sheeting across the land surface, flooding the community as surely as if the water had risen from the river.

A similar phenomenon occurred along North Carolina's Tar River, when small tributary streams to the Tar flooded, washed out earthen pond dams on farms along the small creeks and, then, the water sheeted overland into the towns and only later rose up from the Tar itself. And in Montezuma, Georgia, water sheeted in overland only to be trapped on the supposedly dry side of the levee, inundating the town's entire central business district and remaining there, trapped in the bowl, for days.

Security lodged in ignorance — In Northridge, as elsewhere, small businesses and not-for-profit organizations, short on resources, often occupied older buildings. These buildings rarely meet contemporary standards. Many are designed to a level once thought to be relatively safe, but now considered unsafe and subject to extensive damage during extreme events. Some buildings are, obviously, much more subject to failure than others.

It turns out, however, that older buildings remain intact throughout California, despite frequent earthquakes. How can this be? Older buildings remain standing for several reasons. First, earthquake forces in California occur in many locations that are geologically somewhat isolated from other areas within the state or even the same community. That occurs because California's geology (scraped off the bottom of the sea as it is) contains many fracture lines and the soil is generally dry. Those factors work to attenuate earthquake forces. In the Midwest, however, earthquake forces encounter far fewer fracture lines and travel through moister soil, and thus travel further with less attenuation, resulting in potentially greater structural damage to buildings.

Further, since the Northridge earthquake, seismologists have learned that geological shapes below the surface of the earth focus and redirect earthquake energy, creating greater damage in one area and less in another that may be only a few blocks away. Santa Monica, for example, took more damage than some areas much closer to the

Northridge epicenter.

Still, we heard people say, "this building has stood here for fifty years. It withstood the Sylmar quake in '72 . . ." Each of these people has a sense of security lodged in ignorance. Either the risk has not been communicated effectively to these people, or they are rationalizing their situation by understating to themselves the risk they are taking. Perhaps they cannot afford better, or they may be willing to take their chances, hoping that a devastating earthquake will not strike in sufficiently close proximity to their buildings to kill or injure them or their workers and damage or destroy their inventory.

Reliance on expert opinion—We have been conditioned from childhood to rely on expert opinion. Experts, by definition, know more about the phenomenon and have better information. We might be able to get that information on our own, but it would take time and resources to get that information. But even experts can be wrong. Consequently, when experts give faulty information, it often has serious consequences.

In the case of the flooded communities we visited, levees did not protect against the floods. All along the Red River of the North, people told us that NOAA (National Oceanic and Atmospheric Administration) and the Army Corps of Engineers said the river would crest below the levees, right up until the morning the flood overtopped the levees. Consequently, few of our respondents bothered to take extra precautions, like moving inventory. Today, however, people up and down the river are convinced that both NOAA and the Corps knew better, but they lied to the public. "They said it would crest at 26 feet, but they knew better." We can think of no reason the officials would lie, but that doesn't keep locals from believing they did.

In the communities flooded by the Flint and Tar Rivers, the flood came from an unanticipated direction. Everyone was focused on watching the water rise in the river, but they got blind-sided and suffered the consequences. They had been conditioned, by the technological fix, to focus on the river as the only source of danger.

In Florida, shoddy construction practices and inadequate code enforcement exacerbated the losses to Hurricane Andrew.

In the case of earthquakes, structural engineers and others in the design professions have fared quite well. In other countries, thousands die from an earthquake that in California would kill only a handful of people. But even the best are sometimes surprised. Welded steel buildings were thought to be secure against moderate earthquakes like the one that occurred in Northridge. Apparently, they were not. While none of the welded steel buildings suffered collapse and no one died in any of them, welded joints failed in some unknown number of buildings. The cost of repairing these joints is extremely, high because they are behind plaster walls and ceilings and one cannot tell whether joints have failed without testing each one. The failure of welded steel joints surprised everyone and is the subject of extensive research and analysis to learn why and to keep it from happening again.

False Security in Statistics and Terminology— Collectively, we are not particularly good at communicating information about the risks associated with natural hazards, at least in terms of how often they might occur and what one might protect against.

One reason is that experts sometimes choose to use language to describe a phenomenon that is misleading. One such term is "the hundred year flood." Business owners voiced their exasperation, "How can we have another 100 year flood? We just had one." It is time to use different terms. We should tell people in flood prone areas that there is one chance in one hundred of an event of this size each and every year. And, if you had one this year, the chance of having one next year is even higher, maybe four or five out of a hundred, not for statistical reasons, but for climatological reasons.

One reason for the inadequate communication is that the experts are still learning. Scientists' increased understanding of El Niño and Las Niña effects provides increased understanding of the likely effects on weather patterns, rainfall, and flooding.

It isn't only flooding where people have mistaken beliefs in the frequency of natural hazard events. "We had our earthquake just 25 years ago, where did this one come from?" Even in seismically active areas, relatively few people apparently understand earthquake phenomena at even basic levels. This is, unfortunately, underscored in the recent Nisqually earthquake affecting Seattle. Some Seattle locals were comforted by the fact that the Nisqually and Northridge earthquakes were about the same magnitude on the Richter scale and, while there was major damage in Northridge, there was less damage in Seattle. It apparently escaped their notice that, while the Northridge earthquake was close to the surface and caused surface rupture, the Nisqually earthquake occurred 52 kilometers below the earth's surface. Horizontal ground acceleration in Seattle was in no way comparable to the forces unleashed at the surface in the Northridge area.

Basic information about natural hazards is relatively simple. The information does, however, change from time to time as more is learned about the phenomena. People still, however, typically choose to internalize very little of the information about the risks and the potential consequences for them.

IDENTIFY THE EXTREME EVENTS THAT ARE REAL THREATS TO YOUR ORGANIZATION

The first step in protecting yourself and your business organization is to identify the events or conditions that, if they were to occur, could be devastating for you, your family, and your business.

An initial key to survival is identifying the threats that realistically threaten your business survival. Once the primary threats are identified and given some semblance of priority, you can begin to identify appropriate steps to protect yourself, your family, your employees, and your business. The list may have only a few items on it. Fire will be on most lists. So will losing critical records because of a major computer calamity or other accident. Natural hazards should be added to everyone's list.

We do not expect you to take time to list all the things that could possibly destroy your building, inventory, equipment, or customers' buying power. So, you can leave nuclear war and the earth colliding with a large asteroid off the list. You should focus, instead, on those extreme events that are likely to occur and that one could reasonably protect against: fire, flood, severe storm, earthquake, riot or widespread looting, the closing of a firm that employs most of your customers, and similar events.

Once you have drafted your list of possible disasters, it is time to think about how such an event could hurt your business. Even a nearby lightning strike could destroy the hard drive on your computer, resulting in losing your list of customers, your accounts payable and receivable, your inventory records, payroll information, and other important information. Nearby lightning strikes probably would not damage or destroy your inventory, but a flood or tornado could. A moderate earthquake might not do much damage to a facility, but it could cause extensive damage to inventory not secured or otherwise protected.

Sometimes, it gets a little tricky to think it through. For example, your business might be on high ground, safe from all but a cataclysmic flood of Biblical proportions. However, if all or most of your customers live in a subdivision along the river, you have to be concerned with the effects of a flood on your business. The flood might not hurt you if you are in the construction or renovation business, but if you are in a business that depends on disaster victims spending discretionary money on your goods or services, you might be out of business in a hurry. Even the homeowners with flood insurance do not get settlements right away, they have to come up with deductibles, and they won't have spare cash to spend at your restaurant, on fine clothing, on boats, or on expensive fly-fishing rods – at least for a while.

Look at Probable Consequences

Another way to approach thinking about what to do to protect yourself and your business from the effects of disaster is to think about what it is that would put you out of business, ruin your chances for retirement, or cause your business a lot of trouble from which it would be difficult to recover. You might find it easier to look at the possible consequences of extreme events – create a brief description of various things that could put you out of business – rather than to develop a list detailing various kinds of disasters. These might be things like losing your business records, having a key supplier unable to provide you with inventory, having your sales drop 75 percent for two or three months, losing records of your accounts receivable, and so forth. Then, you can think about the conditions under which those events might plausibly come to pass. That will enable you to focus on how you might protect yourself from suffering those consequences no matter what the cause.

Small businesses and not-for-profit organizations fail following disasters because one or more of three things happen to them.

Businesses fail because they lose their assets— Small businesses fail if an extreme event destroys their assets. This can happen if they are uninsured against a specific threat or if they are insured but the insurance company fails to pay for their loss. It can also happen if the owner continues to draw down assets on hand to replace lost income following an event.

We recommend that you develop a list of ways you could lose your business and personal assets from an extreme event. We know businesses that have failed because of employee theft. We know others that were sued for negligence and never recovered. Mostly, though, we found that companies lost their assets because they did not pay enough attention to getting the right kind of insurance or because they bought coverage based almost entirely on price or because it was offered by an old friend or relative who really wasn't knowledgeable.

Even if you are insured adequately, it is important to pay attention to separating personal and business assets. Pouring personal assets into a business that has little chance of recovering is usually a mistake.

They cannot compete with firms that did not suffer losses— Small businesses and not-for-profit organizations fail if the firm takes sufficient damage that, by the time it is back in the marketplace, its customers have moved on or other businesses have taken their place and the owner is unable to adapt.

You probably already know who your main local or regional competitors are. In the event of fire, flood, tornado, or even earthquake, it is unlikely that all of you will be put out of business at the same time or for the same length of time. If the disaster is big enough, firms will come in from other areas to try to take over a lucrative market or to expand their market share.

Try to come up with ways to provide your customers with continuing service as quickly as possible after the event, but be careful. If your customers do not want or need your services immediately, it is important to adjust your timing to save resources and to position yourself for the post-event business environment.

The solution may be to diversify your location, separating manufacturing or sales and inventory locations, or having more than one site of operations. The chance of losing facilities in two or more locations is much lower than the chances of suffering disabling losses at one site.

They fail when they lose their customers— Small businesses whose customers suffer from an extreme event often fail even though the business itself suffers little or no direct damage. When customers suffer losses, many move away from the area. Many of those who stay and who have suffered losses find they no longer need nor are able to buy the company's goods or services. The damage they experience may result in changed needs and, consequently, changed expenditure patterns. The extreme event doesn't have to happen to you. If it happens to your customers or suppliers, the consequences are just as bad as if it happened to your own building.

BEFORE THE EVENT: TAKE ACTION TO HELP ENSURE SURVIVAL

Small business owners and small not-for-profit organizations are often accustomed to living on the edge. They typically have only a small financial flywheel to keep them going should the cash flow slow down or stop. High priority claims are made on every dollar that comes in. No wonder it is often easier for the operator of a small organization to prefer to pretend that the organization is secure from the effects of natural hazards than to take action to protect it.

Here, we recommend steps that you can take before the extreme event strikes. We have been careful to make recommendations that meet rigorous criteria. First, the recommendations are based on the experiences of real small business people who looked back to see what they could have done ahead of time that would have worked for them. Second, we have tried to make recommendations that are low cost. In some cases, we found people who had taken precautions that actually increased their business' profitability. We have tried to recommend action steps that serve several purposes. Third, we sought to make recommendations that consist of action steps that can be taken over a few weeks or months. We know that the small business owner and not-for-profit manager is almost always overloaded with urgent tasks and cannot take off a week to reduce the threats from events that may or may not happen this year or next. We tried to create recommendations that can be implemented one at a time. In some cases, like adding provisions to the lease to better protect you, the action steps can be scheduled for regularly recurring events, like lease renewal.

Our fundamental recommendations on managing the risks associated with extreme events are fairly simple. First, we ask that you look to see whether it is possible to reduce the likelihood that the event will occur. Second, given some likelihood that the event will occur, we would like you to look at ways you can reduce your exposure to the event. Third, once you have examined ways to reduce your exposure as much as makes sense, you should look at ways to reduce the vulnerability of the structures and materials that will still be exposed to the event.

Reduce the Likelihood That the Disaster Will Occur

You can reduce the probability that some untoward events will happen to your business. Providing a safe work environment, and training employees to work safely will most likely reduce the number of accidents that injure employees. Training employees to not engage in sexual harassment will probably reduce the number sexual harassment cases brought against your firm.

It is a lot less likely that you can control a hurricane, earthquake, tornado, flood, or riot from occurring. Attempts are made to try to reduce the number and severity of floods by building dams and levees. Levees and dams protect against some floods, but, too often, they fail to protect because the floodwaters come from an unexpected direction, are higher than expected, or break through the levee. We encourage you to assume that the presence of a dam or levee will not protect you from devastating losses.

Here is our advice. For those things where you can take action to reduce the likelihood of the event, it makes sense to do so. If you cannot reasonably reduce the likelihood of the event, it makes sense to take actions that will reduce your exposure and vulnerability to it.

Reduce your Exposure

Locate in a Safe Place — Often, the simplest way to reduce your business exposure to a major hazard is to move your place of business. If, for example, earthquakes pose a serious problem for your particular kind of business, move to a location where they are less of a problem. That doesn't necessarily mean you will have to move out of California. It may mean locating on a specific site that is relatively safe. A professional seismologist or structural engineer can help you with that. If floods are a concern, move to high ground. We know of one entrepreneur who didn't want to experience another hurricane, so he moved to Tennessee. He runs his business on the internet, so a Florida location was not necessary for him.

The first question to ask yourself when reducing exposure is whether there is some good reason you have to be located where floods, earthquakes, or hurricanes are regular visitors. We talked with one manufacturer whose firm was located in Los Angeles. He said his firm, theoretically, could be located anywhere and, in fact, he wanted to relocate to Nevada. His wife's family, however, is all in Los Angeles, and she explained to him that he was not going to move the family and the firm away from her family.

Unless you are in a business that requires you to be located on the waterfront along the Missouri River, at the shore in Florida, or on the side of an active volcano in Hawaii, or any of a number of inherently dangerous locations, you have options. You probably do not have to be located in a place where riots are likely to occur or in a tall building where fire, terrorists, or electrical outages can put you at risk. Often, there are desirable locations with lower costs in safer areas. Unless you are truly locked into being in a dangerous location, move.

Diversify product lines, suppliers, and customers —A second way to reduce your exposure is to diversify. Put your eggs in several baskets. If you are a retailer, it is often profitable to have outlets in two or more different locations. It is also a good way to protect your business from an extreme event. We found very few firms with more than one location that went out of business because of a natural disaster. If you can't have more than one retail or manufacturing outlet, consider storing your inventory in a second location (e.g. higher or firmer ground).

Another way to reduce exposure is to broaden your base of customers and suppliers. A retailer in gift items expanded her business to include a small catalog mailed to customers throughout a metropolitan area. She no longer relies only on customers who live in her vulnerable neighborhood. A young man who used to do brake and transmission work just for people in his neighborhood now repairs specialty race cars with customers over a three state area. A fellow who sells woodworking supplies and tools has a retail shop but has also developed into a major supplier to wood workers in half a dozen countries over the Internet. That kind of diversification takes energy and imagination, but it reduces vulnerability, making the small business or not-for-profit organization more robust.

Similarly, you might find it useful to buy supplies and materials from several sources to spread your risks or, at least, learn the extent to which your current suppliers have protected themselves against natural hazards and willful acts.

Reduce your Vulnerability

You have now considered whether you can reduce the likelihood of the consequences of an event affecting you and how you might accomplish that. You have also thought about ways to reduce your firm's exposure to hazardous events. Now, it is time to consider how you can reduce your firm's vulnerability to the events should they occur.

Be prepared for the most predictable contingencies — First things first. You can do a lot to reduce your vulnerability by doing some very simple things.

Prepare yourself for the things you think are most likely to happen. Someone at work will get sick or get hurt. A power outage is likely. Fire may break out somewhere in your facility. So, right now, put a list of emergency telephone numbers next to the phone at the office. Put another list at home; program them into your cell phone. Make a list of important names and information about your business – insurance agent, where the backed up data is stored, important phone numbers, where you keep insurance policies, and so forth. Put it into your handheld computer, keep a copy at home, and give one to a trusted neighboring business. And keep your handheld computer or similar device handy. Keep the first aid kit handy. It should be where people are working, not stored in the back room. Keep flashlights handy in several key locations and make sure they have fresh batteries. If you can afford it, have some emergency lights available. This will help a lot when the power goes out in the next big thunderstorm or when someone cuts through the electrical or telephone cables while installing a new sewer pipe or whatever. It will also help right after the earthquake, tornado, hurricane, flood, wildfire, riot, or terrorist attack.

Protect the most critical elements of your business — Perhaps the most critical element in your business is data. A medical clinic in California lost all of its patient records following an earthquake. The building did not collapse, explode, or burn. It was, however, red-tagged shortly after the earthquake, having been identified as being in danger of imminent collapse. A building inspector's red tag means that no one can enter the building – not for any purpose. Consequently, the patient records went to the landfill with the rest of the building and its contents. Back up data off site. Do it often. Patient and customer lists are essential. So are lists of suppliers and accounts receivable and payable.

Perhaps you have special tools or equipment that can't be easily replaced. We found one man whose company used small and mobile, but extremely expensive and hard to replace, equipment. His firm is in California. When the tools are not in use by the skilled workers, they are placed on the floor in special foam-padded storage containers – even during coffee breaks. That way, they cannot be bumped off a workbench by a careless move. Nor can they be shaken to the floor by a small earthquake.

Perhaps you have inventory that can't be replaced easily. You might have a custom product for a client. Some things may be irreplaceable and have to be protected.

Move to a stronger building — You can protect yourself by being in a better building. Old buildings that don't quite meet current codes are usually cheaper, helping you keep your overhead down. But leasing, renting, or buying old buildings costs less for several reasons. One reason is that they are not as safe as new buildings. In earthquake country, they are not as well designed as new buildings to withstand the forces imposed by earthquakes. In flood country, they are probably not as flood resistant. The wiring is probably not as good as it might be and the roof may not withstand hurricane winds, a blazing blue thunderstorm, or an unusually heavy snowfall.

If you are going to buy a building, it makes enormous sense to have the building and the site assessed by a competent evaluator in your employ. Keep in mind, though, a well-built building on bad soil is no bargain. The Marina District in San Francisco had many quality buildings that collapsed during the Loma Prieta Earthquake on October 17, 1989, simply because the land on which they were built was unstable fill (dumped there following the 1906 earthquake) and it had little resistance to the ground motion from the earthquake. Competent evaluators can tell you whether the site is subject to failure, flooding, landslide, or other hazards.

Make sure your lease agreement allows you to leave — If it is important for you to save money by renting or leasing space in an older building or a building in a risky location, then you should take a couple of simple steps to protect yourself. One frequently overlooked item of major importance is in the lease or rental agreement. We encountered scores of business people who had no disaster provision in their leases and, as a result, found themselves in serious trouble. Your lease should stipulate clearly who is responsible for what in case of damage to the building from natural hazard events, willful or mindless acts of destruction, or accidents. You should also insist on a clause that allows you to get out from under the lease in 30, 60, or 90 days if damage from natural disasters or willful acts of destruction is not repaired satisfactorily to the leased property or to adjoining properties that you might count on to bring business to you. This is not a standard clause in most leases, but you should insist on it. You might have your attorney write the clause ahead of time for you and have it appended to the standard lease agreement. Not doing so can put you in a position where you face financial ruin.

Consider this. If you were the only store left in the mall, in all probability, you would have to be able to get out of your lease to survive. Ask Mary, who had a flower business in a small mall. Hers was the only retail outlet that remained open in the mall after the disaster. The problem was that Mary depended on the bigger stores to bring people in; she sold flowers to their customers as they passed her shop. With no magnet to draw in customers, Mary's flower shop withered for 12 months and then closed. Mary was hopelessly broke and disheartened. Thirteen months after the disaster, the major anchor stores returned.

There are too many cases to tell here of business owners, especially retailers, who found themselves locked into leases and unable to do business in that location. Some of the braver souls simply broke the lease, prepared to engage in litigation with the landlord if it came to that, because they knew, if they stayed where they were, the business would fail.

HOW SAFE IS SAFE ENOUGH?

You are the only person who can decide how safe is safe enough for your small business. No matter what you do, you will not be able to guarantee that your organization will survive an extreme event. What you can do, however, is to make a judgment about what it is that would result in ruin for you and/or your business and to try to protect, at least, against that with some sensible combination of simple, low cost strategies, and insurance. You can ask yourself how much you are willing or able to spend to help ensure that you will financially survive the most probable disasters that could befall your firm and, then, do it. Sometimes, the amount you are able to spend to protect yourself will be very small. Whatever the amount, make sure that you spend it in a way that gives you the greatest protection for the amount spent.

Store data, equipment, and inventory sensibly—Tropical Storm Allison dumped 8.5 inches of rain on the University of Texas-Houston Medical School in August 2001. That is a lot of rain in a short time, but, then, that happens in the Houston area from time to time. As a result of the storm, about 10 million gallons of water rushed into the Medical School. "We will never place animals or critical equipment in the basement again," said the medical school's president (*Corpus Christi Caller Times*). Good idea, but, because it did keep animals, documents, equipment, and experiments in the vulnerable basement, the School lost $52 million in facilities, $53 million in equipment, $7.4 million in lost lab animals, and about $105 million in sponsored research projects were derailed or destroyed. Only about $50 million of more than $200 million in losses was covered by insurance, so the school sought money from the federal government to cover the rest.

Learn a lesson from these people who were unprepared for a fairly predictable event. If you live in an area prone to flooding, store valuable materials on high ground or, if you have to, store it on the second or third floor. If you are in an area subject to earthquakes, store materials so they are less likely to fall over.

In the businesses we visited in Northridge after the earthquake, we saw hundreds of file cabinets filled with important documents lying on their sides, drawers open, and contents all over the floor, with the contents thoroughly soaked with water because the sprinklers were triggered or because one or more toilets or water connections to them broke (but the water pipes continued to try to fill the missing water tank) or because the water heater snapped its braces and fell over. Take some reasonable precautions against simple hazards.

Change how you do business to reduce risks and make more money—We found one manufacturer who changed his production process to just-in-time manufacturing specifically in response to losses he suffered from an earthquake. He used to get parts in whenever he found them at a reasonable price and he stored them until the workers needed them. This took quite a bit of storage space and, in the earthquake, many of these electronic parts vibrated off the shelves and shattered on the concrete floor. Now, he gets parts in as needed, manufactures the product, and ships it out within a few hours of completion. With less inventory on hand, he has less money tied up in inventory, has less to lose from an earthquake, and is able to turn over inventory more often. Less inventory means less cash tied up and more profit. This fellow does have to keep some electronic equipment on hand, but, now, he understands that he is in earthquake country, so he stores these items shrink-wrapped to pallets on wide, low storage shelves. He doesn't want a little earthquake to knock them off the pallets onto the concrete floor to break.

INSURANCE

Insurance Provides You with Options

It is important to talk about insurance. Having the right amounts of the right kinds of insurance will not guarantee that your business will survive and prosper following an extreme event, but it can protect your equity by laying off some of the risk should a devastating event occur. Having cash for the equity you had in the business provides you with options. You can make some reasonable choices following the event. You may choose to reopen in the same business in the same location, open the same business in a new location, go into a different business, or retire from business and move on. Those who do not have insurance or who have inadequate insurance have fewer options with significantly more downside consequences.

We cannot recall how many times we heard "I thought I was covered." Small business people, eager to save money on rates, often simply compare rates without comparing coverage. That is a mistake. It is also a mistake to assume all insurance agents are equally competent. Find a good agent and make him or her work hard for the commission. Make absolutely sure you are adequately covered against the risks you face. Some coverage will be hard to find. Property and casualty companies have tried to cut back on earthquake and hurricane coverage because of recent claim histories.

Property and casualty insurance coverage varied dramatically by type of disaster. Almost every respondent in areas suffering a tornado or hurricane was covered by insurance, simply because wind damage is included in standard property insurance policies. Far fewer than half the flood victims we interviewed were covered, to any extent, by flood insurance. Of those respondents in the hundred-year flood plain, significantly more had coverage; not one of those we interviewed in the 500-year flood plain was insured. Only about 10 percent of our business respondents in the Northridge area were insured against earthquakes.

Just having insurance, however, does not always work out as expected. In some cases, property and casualty insurance adjusters and companies were generous, affording the insured with a windfall. More often, business owners reported that they thought they were insured against the peril they experienced, but were not. Even those who did have insurance sometimes found that it did not work as expected. In Florida, a respondent who believed herself to be fully covered against hurricane losses lost her business and her equity. She reported to us that her insurance company failed as a result of the extreme number of disaster-related claims. She said that she ultimately got a settlement from the state, but it was nowhere near enough to cover her losses.

Other respondents found themselves at odds with their insurers. In some instances, negotiations dragged on and on, with settlements not being made until two or more years after the disaster. A few cases resulted in litigation. Some respondents, feeling as though they were fighting a losing battle, settled for much less than they thought they should get.

Those who did not hold insurance policies or who learned, subsequently, that they were not covered, were faced with difficult choices. Once their equity was gone, the owners faced the choice of taking the loss and walking away or attempting to recover the lost assets by reopening the business. Most chose not to take the initial loss and move on; instead, they tried to reestablish their business and to recover their equity. For many of these people, their entire savings and their expected retirement were wrapped up in the business; if they did not try to get the business up and profitable, they would be unable to retire as they had expected.

Some of those who decided to work to reestablish their business chose to use their life savings, or most of it, to repair their space and equipment or to acquire new space in which to operate the business and to buy inventory. Usually, this was to no avail. One of many, Harry, owned and operated a fresh fish store. He was uninsured. The hazard event destroyed his refrigerators, freezers, and inventory. He used all his savings to replace the equipment and the inventory and to reopen his shop. Unfortunately, the lion's share of his customers moved away. His gross sales dropped and never recovered. Harry felt compelled to comply with the terms of his lease. Three years passed during which he lost money almost every day. When the lease terminated, he locked the doors. At age 65, he and his wife took jobs in the service sector at near minimum wages.

Another retailer whose business had been quite profitable suffered a similar fate in a flood. He lost his place of business and approximately $500,000 in inventory. His agent had told him he didn't need flood coverage. By the time he reestablished a place to do business and bought inventory, he had used essentially all his savings and had to take out a sizable loan. At age 63, he was starting over and, after 18 months, his business was still not breaking even.

A third respondent lost most of her inventory and had significant damage to her place of business. She, too, drew heavily on savings to reestablish inventory, but her sales were far below what they used to be. In her seventies, she sits in the store, waiting for customers who are few and far between. She cannot quit, she reasons, "Everything I have is in this store and the inventory."

Learn from the experiences of these people. Insure prudently. If you are anywhere near water, buy flood insurance. You can get into the National Flood Insurance Program if your community participates. If your community does not participate, call your city council member and get him or her on it. Do not think that if you are outside the 100-year flood plain that you are safe. Half the flood losses each year are in the 500-year flood plain. If an agent tells you that you cannot buy flood insurance in the 500-year flood plain, call a different company, because, if your community participates in the program, you can. Make sure that you understand that you can get insurance on both the structure and the contents, but that it is not automatic. Be sure, too, that you understand the difference between replacement value and depreciated value and get the insurance that makes sense for you.

Get business interruption insurance, but, in addition, make sure that you are covered for lost income in the period after you are able to reopen, but before your business becomes profitable again. Remember, business interruption insurance covers you only during that period when your business is actually closed.

Most of all, get an insurance agent who knows what he or she is talking about and in whom you can have confidence. Do not be bashful about talking with several agents to check one against the other, and not just for rate comparisons. Be particularly careful to see what you are covered for and what you are not covered for.

A Primer on Disaster Insurance.

This is an overview of small business hazard insurance and focuses on flood and earthquake insurance. No mention is made of insurance against terrorism because that topic is still in considerable flux following the events associated with the World Trade Center tragedy.

Before trying to determine what hazard insurance coverage to purchase, small business owners need to understand what their basic Small Business Property Coverage or fire insurance policies cover. For all practical purposes, the basic property insurance policy is the foundation for all coverage and most likely will be a determining factor on what additional coverage for natural disasters insurance companies make available and how much in premiums they charge their policyholders. In most basic policies, earthquake and flood are not covered, and in some basic policies, wind from hurricanes is not covered. Wind from tornadoes and wind from storms that do not become hurricanes are almost always included in the basic property insurance policy. Whenever a policy excludes coverage for specific natural disasters, policyholders must purchase additional insurance or endorsements to the basic policy to cover these exclusions.

Insurance companies have gathered a wealth of information over the years about fire losses to actuarially determine what coverage to include in their insurance policies and how much to charge for premiums. The primary determinants of what insurance companies offer and how much to charge are the type of construction of the business structure, the type of business, protection from hazards such as a reliable sprinkler system, and where it is located in relation to being exposed to hazards. Basically, the more susceptible a building and its contents are to fire, the higher the premiums an insurance company will charge for a fixed amount of coverage.

Building structures —Most insurance companies classify buildings according to the system established by the Insurance Services Offices, Inc. (ISO). The ISO has divided buildings into seven broad classes, of which six can be occupied by small businesses or non-profit organizations. The classes are based on the type of construction.

Because insurance companies have different loss experiences, they have developed their own methods of evaluating the fire risks associated with different types of structures and then setting their premium rates. No two insurance companies offer identical policies and premiums. To understand their fire risk, small business owners should contact their insurance agents to find out which structures have the lowest and highest rates and which insurance companies in their state have the lowest rates for the class of building they either own or rent. If small business owners are contemplating moving, they should also contact their insurance agents to find out the comparative insurance rates for buildings they may move to. A prudent owner may find that a building with a higher price or a higher rent may actually be cheaper to occupy because of lower insurance premiums if it is rated more fireproof than a lower priced building.

Fires are not the only dangers facing the small business or the non-profit. Small business owners need to remember that buildings, even those with excellent fire ratings, may not provide the same protection from natural disasters. For example, a Class 5A "tilt up" building may provide relatively excellent fire protection because it is constructed of fire-resistive materials but be a poor risk in the event of an earthquake because of weaknesses in wall-roof connections. Consequently, small business owners should consider occupying buildings with the least total risk from fire and natural disasters, ones that are insured for the lowest total insurance premiums.

The building owner is responsible for purchasing insurance on the structure. Normally the policy will cover fire and business interruption due to lost rents. The tenant is typically responsible for purchasing insurance on the contents and fixtures. The general rule is that the rates that apply for the building apply to the contents as well.

Building contents — The ISO classifies types of businesses in many categories to establish premium rates. Many classifications exist, each based on its potential risk from fire. Therefore, a small business owner should contact his or her insurance agent to determine what category his or her business is assigned and what rates are charged for property coverage. It may be that making changes to the inventory or altering the manufacturing process will reduce the fire risk, thus lowering the premiums and saving the owner money each year insurance is renewed.

Hazard protection — Insurance companies have found that buildings equipped with fire protection or suppression systems like sprinklers suffer fewer losses than buildings that do not. In the last decade, both insurance companies and researchers have begun using sophisticated computer models to evaluate what factors increase and reduce exposure to hazards. Small business owners and non-profit executives should contact their insurance agents to find out what can be done to lower their premiums and if insurance premiums are discounted when the owner adopts measures to reduce hazard exposure.

Location—Location provides three concerns. First, if a tenant shares space with other tenants in one building or if the building is adjacent or attached to another building, the insurance premiums charged to the building owner and all the tenants in the building(s) will be based on the rates of the tenant in either building whose business is most susceptible to fire and losses. For example, hypothetically a store selling ceramic pottery with relatively low susceptibility to fire because it is non-combustible will pay higher rates if it is located next door to a tenant who stores flammable substances.

Second, a business that is located in an area that has experienced repetitive losses or has a potential for high losses will typically pay higher premiums than a business located where there have been few, inexpensive claims or the potential for losses is low.

Third, insurance companies try to limit their potential losses by selling fixed amounts of insurance in all the areas they do business. In this way, they avoid having all their risks in one or a few places, thus exposing themselves to large losses from a single cause. By selling some insurance in many areas, they spread their risks. Therefore, a small business or non-profit may find it difficult to buy insurance from companies who sell in its neighborhood if they have already sold enough policies to reach their maximum acceptable risk.

Business interruption— Business interruption coverage is often not understood by the small business owner. Quite often, after disasters, small business owners believe they can recover lost income because they remember having seen a reference to business interruption in their policies. Most often, they find out they were not covered.

In the basic property insurance policy, "business interruption" insurance is limited to cover the insured for any lost income during a period of time the covered building premises are being repaired or restored following some physical damage. The basic policy often has several exclusions for the cause of the physical damage. Among the exclusions are flood and earthquake and sometimes hurricanes.

Contingent business interruption provides coverage for loss of income resulting from physical damage, not to the property of the insured, but to the property of either its suppliers or its customers.

Business interruption insurance covers only the time period that the business is closed. Once it opens, whether customers return or not, coverage stops. Therefore, if a company is closed for ten days for repairs from a fire, for example, it can submit a claim for the lost income for those ten days, but not for unprofitable days and weeks that follow.

Business interruption insurance most likely does not cover additional expenses incurred for a company to restore business operations. When a business is closed, not only does its existing lease or mortgage payments and utilities continue but it may have to move to temporary quarters, replace lost materials from vendors (who may charge higher prices and delivery charges), pay overtime to employees, and secure products and services from competitors to help meet existing orders. To pay for these expenses, it may be necessary to purchase a policy for additional expenses.

Assume that the company reopens but its customers do not return and revenues do not meet expectations or reach past totals. These losses are not covered in the basic policy. Paying for additional coverage in the form of an endorsement normally entitled "extended business interruption" can, however, cover them. Extended business interruption provides coverage for a specific period of time established in the policy allowing companies to recover lost income until the time limit of the policy is reached or until the company's income reaches its pre-loss level, whichever comes first. For example, a company may purchase extended business interruption to last 30 days following the reopening of its business. If the revenues do not reach expected levels by the end of 30 days, the business can file a claim for only 30 days of losses, no matter how much longer than 30 days revenues fail to reach expected levels.

As mentioned at the start of this paper, a company may be undamaged but its income may be negatively affected when key suppliers are damaged and unable to provide the goods or services needed for the company to operate. Or, it may suffer losses of revenue if its customers are damaged and they stop purchasing the company's goods or services. These types of business interruption are not covered in the basic property insurance policy. They can, however, be covered by an endorsement normally entitled "contingent business interruption." Contingent business interruption provides coverage for loss of income resulting from physical damage, not to the property of the insured, but to the property of either its suppliers or its customers.

When buying business interruption coverage, the small business owner or non-profit executive must be fully aware of what causes of physical damage are permitted in the insurance policies and which are not. Typically, physical damages caused by natural disasters such as earthquakes and floods are not covered and additional insurance must be purchased to cover these contingencies. Business interruption insurance is usually expensive.

Flood insurance — The basic business property insurance policy almost always excludes any property damage caused by flood. For small businesses, flood insurance can be purchased from one seller, the National Flood Insurance Program (NFIP), managed by the Federal Insurance Administration of the Federal Emergency Management Agency, Department of Homeland Security. Insurance can be purchased by any small business or non-profit organization that is in a community that participates in the NFIP. More than 19,000 communities that are at risk from flooding voluntarily participate in the NFIP; however, there are more than 2,000 that do not. If small business owners and non-profit executives want to purchase flood insurance, they must first determine if their community currently participates in the NFIP. The simplest ways to find out this information are to call their insurance agents, go to the FEMA web site that lists the communities and look up the community by state (or use your search engine to look for the National Flood Insurance Program Community Status Book), or call the local building code official. Once it is determined that the community is in NFIP, the small business or non-profit organization can purchase flood insurance.

The NFIP defines a flood as a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties (at least one of which is the policyholder's property) from:

- Overflow of inland or tidal waves;
- Unusual and rapid accumulation or runoff of surface waters from any source; or
- Mudflow; or
- Collapse or subsidence of land along a shore of a lake or similar body of water because of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.

Flood insurance coverage is limited to losses caused to buildings and contents by rising water that is the result of the events listed above. Flood insurance does not include business interruption or losses caused by falling rain or wind that may accompany rising water. If physical damage occurs to either a building or its contents from wind or rain, these are typically covered in the basic property insurance policy. It is quite common in a hurricane for a building to be damaged by wind, rain, and flooding. Often, after hurricanes, insurance adjusters debate the cause of losses to determine which policy pays.

Just because a small business owner finds his or her property to be located in a moderate or minimal hazard risk zone does not mean there is no flood risk. Since the beginning of the NFIP about a quarter-century ago, about one-third of all flood losses have taken place in zones considered of moderate or minimal hazard risk.

To a large extent, premium rates depend on which flood zone a building is located in, and, if it is in a special flood hazard area, whether it was constructed to NFIP standards or not. Because many buildings were built before their communities joined the NFIP and before flood maps existed, they were typically constructed without considering potential floods. This construction, termed Pre-FIRM Construction, is subject to rates that reflect potential losses should a 100-year flood occur. Rates are lowest for buildings with no basement or enclosure and where the contents are located above the ground floor. Rates are highest for buildings with basements and/or enclosures and where the contents are located in the basement and/or enclosure or near ground level.

Earthquake insurance—Earthquake insurance is not included in the basic property insurance policy. State insurance laws do not require property and casualty insurers to offer earthquake insurance. However, in most states, because earthquake insurance is not often purchased and there is little demand, most insurers who sell business and commercial policies offer it. In California, by contrast, because of past loss history in the state, high demand, and expected high losses, not all insurers offer it, and those who do offer it strictly limit the amount they offer in high-risk areas.

Small business owners and non-profit executives who purchase earthquake insurance can expect to pay high premiums and have high deductibles, which normally range from 5 to 20 percent per occurrence. Premiums are variable, depending on the earthquake risk where the building is located, its type of construction, the soil it is on, and the availability and cost of reinsurance. Because of knowledge gained each year through structural analysis of building construction and earthquake loss models used by insurance companies, insurance underwriting (determining coverage and premiums) has become a sophisticated exercise, producing complex formulas to determine what insurance companies have to charge. There are no good rules-of-thumb to calculate expected premiums.

Insurance companies typically divide states into different zones based on earthquake risks. In California, the Department of Insurance specifies 12 zones. However, all counties except Los Angeles, which is divided into two parts, must be in one zone, even if there is a significant difference in earthquake risk in different parts of the county. Although insurance companies do not use earthquake risk maps developed by the US Geological Survey for rating purposes, small business owners should contact their state Geology Department to find out what the actual risk facing them is. Several insurance company sites on the Internet will evaluate the earthquake risk of a building free in the hope that users of this service will buy insurance from them.

The amount of earthquake insurance offered each year and the premiums charged depend on the amount of reinsurance available in the world market. Primary insurers, those that sell policies to small businesses, generally insure against a disaster by buying their own insurance policies from reinsurers that agree to pay for losses above a certain amount up to a specified maximum. In this way, insurers spread their risk and avoid catastrophic consequences. Since Hurricane Hugo in 1988, the amount of reinsurance has varied considerably, especially after Hurricane Andrew in 1992 and the Northridge earthquake in 1994. Generally, the amount of reinsurance drops following a major disaster as reinsurers recoup their losses and rises in following years when there have been few disasters. What matters to small business owners is that premiums for earthquake insurance can change dramatically from year to year, reflecting the cost that their insurance companies must pay for reinsurance and how much is available. ◆

Chapter 7 | **IMMEDIATELY BEFORE, DURING, AND AFTER THE EVENT**

Some disastrous events strike with little if any warning. We have heard that pigs and dogs can sense oncoming earthquakes minutes or hours before they occur and we have heard about current research that suggests earth-orbiting satellites might be able to help us detect imminent earthquakes. For now, and maybe for a long time to come, earthquakes will occur without any immediate warning. Certainly, in Northridge, California the 1994 earthquake occurred early in the morning without immediate warning. The first plane that terrorists crashed into the World Trade Center apparently came without warning, as did the bombing of the federal building in Oklahoma. In St. Peter, Minnesota, the devastating 1998 tornado was gone before most of the community knew what was happening.

Other kinds of disasters can be anticipated with confidence hours, sometimes days or weeks, before they occur. Landslides may or may not give warnings, but, in Southern California, they are quite predictable following several days of heavy rains. Readers may recall video footage of homes teetering on the bank, only to crash downward hours or days later. Locals are accustomed to seeing the shattered ends of utility pipes sticking out from the side of the palisades.

Avalanches seldom give warning, but seasoned observers know when conditions are right for them in a specific place. Similarly, in the past decade or so, meteorologists have become able to tell us, within a few hours, when tornadoes are likely. Doppler radar can often spot tornadoes. Sirens provide warnings of imminent tornadoes, but their rapid and often erratic movement doesn't give much time to prepare once they are sighted. In those cases, however, there is usually enough time to take steps to seek shelter and to protect lives.

Hurricanes and flooding, on the other hand, are often (but not always) tracked for hours and days before they strike, leaving time for prudent people to take steps to reduce their losses. In South Florida, when hurricane Andrew hit, most people knew it was coming and there was a high probability that they would experience its effects.

Here, we recount for you things that businessmen and women did and wish they had done to reduce their losses as an extreme event began to unfold around them. We think their experiences will be useful when a disaster looms before you and your business.

Remember, the most important thing for you to do is to take immediate steps to protect yourself, your family, and your employees from being injured or killed in the event. You can always find a way to make a living, even if everything around you is destroyed. It gets more difficult if you are badly injured or if someone near to you dies as a result of the event. In Northeastern Wisconsin, where we are writing this, there is a saying among some of the older, more folksy natives: "It's only money; the cows can't eat it." That is their way of keeping priorities straight.

AS THE EVENT BEGINS TO UNFOLD

The "before" in this discussion recounts the actions, anxieties, frustrations, and ingenuity that people experienced immediately before (usually after warnings) the coming disaster.

The first order of business is to get everyone into some safe place. It might be the storm cellar, higher ground, under a strong table, or in one of the new "safe rooms" being built into some homes in Tornado Alley. If you have not already set aside emergency supplies (which you know you should have) and there is time, gather drinking water, a battery-powered radio, a flashlight and batteries, and first aid supplies. There are lots of good publications from FEMA and the Red Cross on how to prepare emergency kits at home and at work. Get one or two today and do what they suggest right away.

In Montezuma, Georgia, hardly anyone noticed that flooding was coming from Beaver Creek rather than from the Flint River. No one told the Ford dealer about the flooding coming from behind him; his attention was focused on the river. There was little warning. In Breckenridge, Minnesota, the flooding came overland from rapidly melting snow rather than directly from the Red River. There was little warning. Downstream from Breckenridge (in this case, further north), in Grand Forks, North Dakota, and East Grand Forks, Minnesota, people had information that the river was rising and that it was flooding upstream areas. They thought they were ready, but they weren't.

In North Carolina along the Tar River, people downstream from the flood crest knew it was coming. Several of the business owners and operators did something to protect their investment. The son of an appliance store owner drove into Tarboro from Rocky Mount and told his dad, "It's moving this way." Even though they were not in the designated flood plain, they were only two blocks from the river, so he and his dad moved the inventory of his main street store to the third story (fortunately, there was an elevator). As it turned out, the flooding did not come from the river two blocks away. It came down the main street from the opposite direction. Even so, most of their retail inventory survived without damage.

Three blocks up the street, nearly two days before the flood, a shoe storeowner moved his inventory to the second level, managed to find three pumps, positioned them strategically in his shop, and used silicone sealant to caulk the cracks around outside doors.

Other business owners, who knew the flood was coming, moved their inventories "up" onto tables, onto shelves, to any level higher than before and did things to keep water from entering their place of business. One moved as much inventory as possible into his garage at home; home was on much higher ground than the shop. Business people relied on duct tape, sand bags, top soil bags, and quickset concrete dams to help with their countermeasures. A few people strapped and bolted down storage tanks and secured other items that could float away. One person cut the rug away from the wall, hoping the water would not wick up the wall.

Some people chose to protect their data. We talked with people who kept their records on personal computers and who simply picked up the computer and put it into their car or moved it to an upper story to protect their records. A pharmacist loaded all the prescriptions he serviced and all the medications in his shop and took them to a safe place on high ground. He reasoned that, if the flood were bad, people were going to need those prescriptions and it was his obligation to provide them. The rest of the store and inventory got very wet and very muddy.

It would make good sense to make a list of what to do in case of fire, flood, or pending hurricane and to keep it in your purse or wallet and in a conspicuous place in your home and place of business. The reason is that, as the wildfire approaches, the water rises, or the wind begins to howl, the chances are exceptionally good you will not be thinking as clearly as you would like to be. You and those around you will be stressed. Someone will panic or become hysterical -- depending on how high the water is, whether branches are crashing onto the roof, and how thick the smoke is. One of the authors of this report is a former military pilot who often flew in combat. "There's a reason we carry checklists in airplanes," he says. "When people are shooting at you and holes begin to appear in the cockpit or an engine 'falls off,' checklists make it a lot easier to remember what to do."

The focus of the actions taken by those we talked with was to protect property that represented years of effort and financial investment. During this accelerated attempt to protect inventory and equipment, business records and important business and personal documents were sometimes overlooked and forgotten in the rush. During the warning period, immediately before the flood, owners sometimes defined their businesses in terms of inventory and equipment. If you are in a service business or have little inventory and equipment, you may think that you have little to lose, but that may not be an accurate perception.

AS THE WIND RAGES AND THE WATERS RUSH IN: DURING THE EVENT

When the flooding came to Tarboro, many people evacuated the area. Others stayed and did what they could to reduce their losses. The shoe storeowner and some of his employees were able to pump water from their silicone-sealed facility fast enough so that no more than an inch of water accumulated inside the store as the water level outside rose to more than 30 inches above the doorsill.

At the appliance store, water filled the crawl space under the floor, then it covered the floor. His inventory was safe on the third level, but the owner lost all his files and service information documents, which had been forgotten in the rush to save inventory. This is one reason we suggest that you make a checklist of what is important and what needs to be done.

Flooding in downtown Tarboro buildings ranged from a few inches to nearly six feet in lower areas. In some parts of town, it took five or more days for the water to subside fully. But across the river, in Princeville, ten to twenty and more feet of water covered much of this small community. The levee that the Corps of Engineers had built along the river after a previous flood provided the people of Princeville with a wholly unwarranted sense of security.

One Princeville business owner who was located very close to the river told us that on Thursday, the day after the storm, there was no flood water in his business. When he showed up for work on Friday, there were two feet of water in his facility. He secured his files. In two hours, the water was up to his chest. He left. Soon all of Princeville and parts of Tarboro were evacuated.

While at his home in Tarboro, one business owner heard a helicopter hovering in the area. He did not yet realize the severity of the conditions, but he knew "something was not right." At 9:00 in the evening, his sister knocked at the door and told him that Princeville had been evacuated. By morning, he had 25 more people in his house.

Army, National Guard, and Coast Guard helicopters helped evacuate people from the flooded areas. More than 10 percent of the residents in the county were forced from their homes. The county manager said that he thought about 35 percent of the county residents were caught unprepared. Rescue, fire, emergency, utility, and relief crews worked continuously to restore utilities and essential services, to provide for people evacuated from the flooded areas, and to carry out the emergency recovery process.

In Princeville, SCUBA teams searched submerged houses for people. Doors were marked with an "X" signify the house had been inspected and cleared. After the flood, as the water subsided, its consequences emerged, and cleanup began.

IMMEDIATELY AFTER THE EVENT

What to Expect in the First Few Days Following the Disaster

At some point, the shaking stops, the floodwaters recede, the wind stops howling, and the dust begins to settle. "Ah," you say to yourself, "It has finally ended." But, you are wrong. The truly difficult part has just begun.

Your personal life will become stressful and uncertain following the event, even if you did not lose anyone close to you in the disaster. You are likely to experience considerable ambiguity, particularly if both your home and your business were damaged. For many business owners, stress will come simply from memories of the experience and from physical and mental exhaustion. You, or members of your family, will probably experience difficultly sleeping soundly. Nothing will be "normal."

Much of the stress will come because your primary source of income is gone, at least temporarily. Stressed employees will pass some more stress on to you. There will be stress from insurance delays, questions about coverage, and settlements. You may find yourself stressed about things you wish you had done, but there is little to gain in "I wish I woulda . . ." laments. Your family members will be stressed, particularly because you will conclude that the business has to be repaired and put back in operation before you have time to work on the damage to the house. The delays in repairing your home and all the stress around the business and loss usually leads to increased stress at home with spouse and children.

In your business neighborhood, there will almost always be an underlying assumption on the part of business people, property owners, and public officials that "things will get back to normal soon." "This was just a big bump in the road." Don't be fooled. If the event was really extreme, things will not get back to normal soon. Chances are, they will never get back to what you used to think was normal.

We found that there is often social pressure from other business people in the damaged area, from insurance companies, and from local politicians to get back into business quickly and to make things like they were before. If you have business interruption insurance, the insurers may press you to reopen quickly. They'll probably say it is important to do so because you need to get the cash flow started, but the fact of the matter is that, once you open your doors, their financial obligation to you stops, given traditional business interruption insurance. Employees will want to get back to work. Government officials will talk about "getting back to normal as quickly as possible." People will make statements for the media about how "no little hurricane (flood, earthquake, terrorist attack, riot, etc.) is going to drive us from our homes! We're rebuilding right here!" even though "right here" may not be a very safe or sensible location.

You should not expect to receive much information about rebuilding plans from the city or from building owners in the period right after the disaster. If you do get information, much of it could be contradictory, wrong, or changed tomorrow. State and local governments may be slow to respond with needed variances and recovery policies.

Some, perhaps many, people who lived in the damaged area and either lost their homes or experienced other losses will move away, many of them permanently. Volunteers and others will be there to help clean up, but they, too, will disappear as the physical evidence of the disaster is trucked away. Fundamental changes in the community will already have begun. Neighborhood trends that started before the event are likely to speed up. The neighborhood will change forever, even if the buildings are put back just the way they were before the event. A new set of relationships, new neighbors, and new business patterns will develop. Those businesses that survive will be those whose owners and managers understand and adapt to the new business environment.

It took several days, almost a month in some areas, for the water to go down to normal levels along the Tar River. During this time people went back to reclaim their homes, their property, and, for some, their businesses, hoping and expecting everything to return to "normal." In Tarboro, an appliance store was closed for two weeks. Police would not let people travel on Main Street for five days after the river crested. Along with everyone else, the proprietors were without water for nearly seven days and the electrical service was not reliable for four to seven days, as best as they could remember. The flood water was nasty – dead animals, gas and oil, sewage, mud…

When the appliance store finally opened, there was an initial rush (people cannot live without a TV). After the initial rush, business slowed and then began to pick up slowly over time. The owner of the building had flood insurance. Later, after the flood, the appliance store operator bought the building and got his own flood insurance to cover contents as well as the building.

Across the river, in Princeville, virtually all of the town's buildings were uninhabitable. For almost every business owner, getting back in business became complicated; much more than a cleanup process. One of the local funeral homes had to be entirely rebuilt. For more than a year it operated out of a temporary facility. When an engine repair business reopened for business, more than half of the facility was closed off. Everything in the facility was coated with oil, gas, and other petroleum products, making it nearly impossible to clean and difficult to breathe when one entered the facility.

A sports store, located near the edge of the flooding, survived with little damage to the building, but the protein in the wet pet and animal feed inventory left an extremely unpleasant odor that was impossible to eliminate. The owner closed his business.

An auto repair shop, housed in a steel building, was back in business relatively quickly. But there were few, very few, customers even a year after the flood. A taxi company was initially run from the owner's home, then moved to a trailer home located at the former site of the business. Few people had moved back to Princeville even a year after the flood. Business was down for a long time and the prospects for an upturn anytime soon were slim. ◆

Chapter 8 | WHAT TO EXPECT IN THE WEEKS AND MONTHS FOLLOWING THE EVENT

IT WILL BE A NIGHTMARE FOR A LONG TIME

Nothing will be easy after the earthquake, flood, hurricane, or tornado. The initial clean-up is, by far, not the worst of it. You may experience a severe business downturn. You will experience stress. If the event is large enough and devastating enough, you will experience changes in the community and in established business relationships. For many, the turmoil that follows in the aftermath of the event will overshadow the event itself and last for a long time.

Many of the people we talked with described long-term emotional and psychological effects precipitated by the disaster they experienced. When we asked one business owner what happened in the disaster that devastated the area years earlier, she responded by showing us a picture of her only daughter who had been killed by the storm. Though she was slowly rebuilding her business after the disaster, her personal disaster will always be there.

One couple, whose business was severely damaged by a disaster event, were still finding glass shards on their business property three years later: unwanted reminders of the traumatic event. This couple's business is on the way to recovery, but recovery from their personal, emotional disasters may take considerably longer. The husband was diagnosed with and treated for clinical depression precipitated by the event. Three years later, he is still in recovery. Recounting the experience and the process they endured brought tears to their eyes as they told us of their continuing nightmare.

In another case, the manager of a nonprofit organization reported that she found her mother, after the event, ashen-faced, staring blankly into space, and generally non-communicative. This lasted for months after the disaster. Some business owners sought medical treatment; others might have benefited if they had received treatment.

A woman who owned a successful home-based business told us how the disaster that destroyed her business also had a profound emotional impact on her and the members of her family. She lost her business to the disaster and her marriage to its traumatic aftermath.

Another business owner was able to reopen his business before the competition because the steel building in which his business was located incurred very little structural damage from the flood. The cleaning-up, fixing up, replacing damaged equipment, finding the money and loans to pay the bills, took months. During this time, his employees, which included his son-in-law, found work elsewhere and left the area. He had little help, few customers, equipment to repair or replace, no money, and an emotionally stranded family. Though he was back in business, there was no business. Each day he sat at his desk planning repairs and purchases he could not afford and waiting for customers who never came.

One store we visited was up and running within a few months of the disaster. Three years after the disaster, the owner had more than $100,000 in inventory and few customers. The disaster and its aftermath had changed his customers' buying habits. Competition had increased. He had to cut back on his sales staff and his wife took over bookkeeping and administrative responsibilities. They are living on revenue generated by accounts receivable left over from before the disaster. He knows the receivables will run out. "Then what do we do?" he asked, not really expecting an answer. The day-to-day nightmare continues long after the immediate trauma and devastation related to the disaster subsides.

Here is the key point. It is going to be tough going after a devastating event. You and all those around you will be under great stress, trying to deal with a situation that most of you did not expect and for which you do not have ready coping skills.

One banker we talked with in Florida described Hurricane Andrew as a 360-degree disaster. "It was all around us," he said. "It affected everything." Many of our respondents suffered a 360-degree disaster. The disaster affected their business and livelihood, their home, their family, and almost every moment of every day for months and even years.

Here is the key point. It is going to be tough going after a devastating event. You and all those around you will be under great stress, trying to deal with a situation that most of you did not expect and for which you do not have ready coping skills. You would do worse than to expect mental anguish and, perhaps, depression. Even if your marriage is rock solid before the event, it will suffer strain after the event. If you start to notice symptoms of depression or other disease, get professional help right away.

LOTS OF HELP THE FIRST FEW DAYS

Clean up following a disaster event is ugly work. Clearing mud, broken glass, parts of buildings, dead animals, sewage, and drowned vegetation is hard work and often distasteful. It is made all the worse when the debris represents your memories, hopes, and dreams.

We learned that some degree of cooperation, mutual assistance, and teamwork emerges during and right after a natural disaster or other extreme event, regardless of the disaster type, its extent, or its location. We heard often-similar stories of leaders emerging, compassion and charity, and hard work from residents and volunteers. We also observed, however, that the higher level of teamwork and cooperation seldom endured for more than a week or two.

In one community, a bar and restaurant owner opened his kitchen and provided free meals for people who had nowhere to eat. "The power was out and the stuff in the freezers was thawing. It made a lot more sense to give it (the food) to folks who needed it rather than to throw it out," the owner told us. Initially, the food was just from the restaurant's freezers, but, before long, people throughout the community were donating food and the owner served meals until the recovery process provided alternative sources.

When the Tar River flooded, one storeowner was offered a set of display cases after his plight was broadcast on television. The same television news story moved a person who had recently retired from the same business in Maryland to send a set of tools to replace those the jeweler had lost in the North Carolina flood. Individual initiatives were frequent, consequential, and noticed in each community we visited, but often individuals working together as part of groups and organizations contributed to the disaster relief and recovery process.

In communities with colleges, students, faculty, and staff often became involved in cleanup. In some locales, college students and staffs also disseminated loan and recovery information. Following every disaster, individuals and organized groups of people showed up to help with cleanup and recovery. At several sites, busloads of people came, sometimes from more than a thousand miles away, on weekends.

In Montezuma, Georgia, Mennonites took a leadership role in helping local businesses rebuild their flood-damaged buildings. Mennonite carpenters and craftsmen from throughout the East worked at cleanup and rebuilding, asking only that those being helped get involved in the effort.

People from Grand Forks, North Dakota, who had experienced extensive flooding two years earlier, shared their experiences with the people in Tarboro, North Carolina after the 1999 flood of the Tar River. Several months after the flood, the local museum staff and directors with the help of numerous individuals and three local corporate sponsors organized a story/drama project to help the community cope with the emotional effects of the disaster.

In the communities we visited, bankers, Chamber of Commerce staffs, town and city officials, business owners, and many others assumed leadership roles, not always by choice, to help coordinate and direct various aspects of the recovery process. After a tornado devastated St. Peter, Minnesota and the local college, the college president set some challenging goals for recovery and rallied faculty members, staff, students, and alumni to do what was necessary to meet the goals. The campus community also helped the people of St. Peter with cleanup in the small town.

Occasionally we found some level of cooperation between the public and private sectors, but it was generally short-lived and usually associated with a specific project or program.

DON'T EXPECT MUCH HELP AFTER THE INITIAL CLEANUP

We found that the immediacy of disasters that threaten life and property make teamwork essential. We also found that time dilutes teamwork and collaboration. Private volunteers and charitable organizations move on to other, more immediate challenges and American governments are not geared to helping small businesses with their struggles to survive following extreme events.

Americans tend to have short attention spans, particularly with regard to other people's problems. As the physical evidence of the flood or earthquake is trucked away, it becomes yesterday's news and the headlines focus on whatever is hot today. The people who helped you shovel mud or rubble, and salvage what could be recovered, evaporate from view as they get back to taking care of their own needs. Long-term support systems rarely emerge to help you through the next stages. This is when the really difficult part begins for the individual small business owner.

Limited Federal Assistance to Small Businesses

Mostly, federal disaster grant programs are intended to help individuals who suffer losses and who need immediate emergency assistance and to help states and local governments repair and replace public infrastructure – roads, water treatment and distribution, sewage collection and treatment, schools, public buildings, and so forth. Only a few federal assistance programs are aimed at helping small businesses recover. These are mostly loan programs. Few, if any, grants to small businesses are available from the federal government, so do not expect a representative of the federal government to show up with checkbook in hand, offering to make you whole after the disaster. It isn't going to happen.

The federal government does provide disaster loans to small businesses. The U.S. Small Business Administration has a Pre-disaster Mitigation Loan Program designed to make your place of business more robust against extreme events. It is useful to you if you are unable to secure financing from non-governmental sources without creating undue hardship for your firm. Once a disaster has occurred, loans to loan-worthy small businesses are available to help repair or replace lost equipment and property. Loans are available even if your business did not experience physical damage. If your customers were made destitute by the event, for example, and you can demonstrate an economic hardship that flows directly from the disaster, you may be eligible for a loan.

In the case of Grand Forks, which experienced a large flood in 1994, and Los Alamos, which experienced a wildfire in 2001, legislation was introduced in Congress by the state's Congressional delegation and was passed. In those two cases, the federal government provided massive amounts of financial assistance – assistance far in excess of that provided to other communities with similar problems under any existing federal or state disaster assistance legislation. Similarly, special legislation was enacted shortly after the World Trade Center attack, providing vast sums of federal money to New York for a variety of purposes. The costs to the federal government for disasters, however, have become so enormous that no one should expect a federal bailout unless their state or community has sufficient influence in Congress to get their hands deeply into the federal treasury.

Help from State Government

State governments vary markedly in their concern about communities that experience a disastrous event and in their competence and capacity to help those communities. Following the Red River of the North flood in 1994, the State of Minnesota worked effectively with East Grand Forks to develop and implement a community rebuilding strategy. A key element of the rebuilding was to help small businesses get a firm footing toward recovery. Minnesota state government has an activist, liberal tradition of working to solve social and community problems. Neighboring Wisconsin has a very strong set of policies governing waterfront development, especially along rivers. There, high state standards concerning building in flood plains has helped make Wisconsinites safer from flooding. Partly because of the state government's proactive stance, Wisconsinites pay the lowest property and casualty insurance rates in the United States.

Some other Midwestern states, especially those west of the Mississippi, have a conservative, hands-off political tradition. Missouri, for example, does not even require all its municipalities to adopt and implement building codes. In that state, where flooding seems to be an almost annual event, relatively few public funds are expended to reduce the flooding risk, except for money that can be extracted from the federal treasury.

The long and short of it is that local small businesses are not likely, except in a few places, to be able to look to state officials for help following an extreme event, except to the extent that some states funnel federal assistance through one or more state agencies.

Local Government Assistance

Local governments have their hands full in the immediate aftermath of an extreme event. Their first priority is to help ensure public safety and, during and immediately after the event, they will be focused on that. The next highest priority is typically restoring public utilities and other critical infrastructure, like streets and bridges. This is important, of course, for small business. It is difficult to operate without reliable electricity, water and sewer services, and streets free from rubble. The faster the city or county can reestablish those services, the fewer losses are experienced, and the better the local government can ensure safety.

It isn't long after the disaster that local governments begin to turn their attention to their own problems. Local governments can't run without money and most of that money comes from assessing taxes on local property values and business activity. Homestead and Florida City, Florida, lost almost their entire tax base because Hurricane Andrew flattened almost everything in those communities. State and federal assistance to the municipalities helped for a while, but it wasn't long before both municipalities were forced back on their own devices to raise tax revenue.

Because municipal governments need revenue from property and sales taxes, they quickly become interested in how business is doing after an extreme event. They want to ensure that the community has an adequate business base to maintain the population and to provide revenue needed for services and infrastructure. Unfortunately, while most municipalities care about businesses, few know enough about small business to be of much help in the post-event chaos. Local governments seem to be better at trying to attract new business than at helping existing businesses survive and flourish.

Most communities that are impacted severely by an extreme event ultimately devise one or more programs to help small businesses. These are usually loan programs. Typically, the loans are small and come with special conditions attached. Most often, the owner is precluded from relocating the business or from moving outside the municipal boundaries. Interest rates on these loans are often subsidized so that they become low interest or no interest loans. Repayment schedules for the low interest and interest free loans are sometimes demanding, sometimes unrealistic, in light of the disaster's impact on the entire community. More than one owner we talked with found that relocating their business was essential to recovery, but relocation was contrary to the provisions of their loan from the municipality, putting them in a difficult bind.

In some communities, U. S. Department of Housing and Urban Development block grants were used to help businesses. Sometimes, Community Development Block Grants provided money for revolving loan funds to small businesses. Other times those monies were used to pay the interest on loans made to small businesses. In some jurisdictions, loans were forgiven over a time period provided the business owner kept the business open and located in the municipality for some specified time period.

In Montezuma, Georgia, downtown businesses were damaged extensively by a flood, while only a few residential neighborhoods experienced any damage. Town officials found themselves in a quandary. Since few disaster-related federal and state aid programs benefit small businesses, the municipality worked hard to find ways to get aid and relief for downtown businesses. The city was relatively successful in doing so, launching an impressive effort to reestablish a commercial center in the small town. The efforts took a long time, however, and, by the time they were completed, many of the downtown merchants had already suffered irreversible financial setbacks.

You Will Be Pretty Much On Your Own

"Not only were we not eligible for any help from FEMA, but we weren't eligible for any assistance programs. As soon as the people at the Red Cross found out we owned our own business, they told us to go away," lamented one couple that had lost everything. Private charitable giving following disasters is almost always aimed at individuals and families who have suffered significant losses. If that family owns a small business, even if it is not profitable, it is usually out of luck.

Small businesses are hardly ever a target for charitable giving. Do not expect a bailout from the federal, state, or local government or private charities. Government does not understand your needs and it will not be sending money to help you. The fact is that no one is going to bail you out of your predicament. You are going to have to make it on your own after the event, just like you did when you first started up or took over the business. ◆

DECIDING WHERE TO FOCUS YOUR ATTENTION

Even before the loads of rubble or mud are trucked away, your mind will have already turned to the question of where you will place your emphasis and your cash reserves in an attempt to "get back to normal." If both your home and your business experienced damage, and you are like most of the people we have talked with, you will decide to try to put your main efforts on the business first. "After all," one person told us, "If the business doesn't make it, we're going to lose the house anyway."

Many business people we talked with lived with extensive damage to their homes for a long time – months and even years – as they worked to clean up and reopen the business. After a few days, the adventure of camping out at home loses its appeal, even for young children. The emotional tug of war about how to split your time between expending energy and money at work to start making a living again and fixing up the house so it is livable often results in stressful relationships at home and a sense of never being able to escape the effects of the event. It will not be easy.

Even if your home is not affected by the event, there will be challenges about how to focus your attention at business to help ensure you will survive the aftermath. The strong tendency is to jump right in and to get things back to normal. That is not always a wise move. Think about priorities and choices before taking the leap.

Chapter 9 | YOUR GOAL: TO SURVIVE AND FLOURISH IN THE MONTHS AND YEARS FOLLOWING THE EVENT

Many people who own a small business are not, first and foremost, business people. They are craftsmen, jewelers, mechanics, metalworkers, hairdressers, or others whose special skills or interests sometimes lead them to become small business owners. Most do not have extensive education or training in management, finance, marketing, human resources, and accounting. Because these people think of themselves, first, in terms of their special expertise and second as business people, typically, their immediate response following an extreme event is to get back to doing what they know how to do best and to do so as quickly as possible. The business owner himself or herself will want to "get back to normal" – to have the income resume. If the owner has business interruption insurance, the insurance company is likely to press hard for the business to reopen so it can get off the hook for additional days, weeks, or months of claims.

The key to surviving in the aftermath, however, is to develop a strategy that is appropriate to what is happening around the individual small business. Our goal is to help the small businessperson survive the event financially. Sometimes, that means it is important to reopen quickly. Other times, it may mean shutting down the business and moving on. This chapter focuses on how to decide what to do, all with the goal of increasing the chances of financial survival for a small business owner following an extreme event. It is aimed at helping the small businessperson decide on a strategy that is tailor-made for his or her business.

Disastrous events have many things in common,but, at the same time, every extreme event and every business is unique. One post-event strategy does not fit everyone or every business. You have to creat a strategy that meets your needs based on the specific effects of the extreme event your community experiences. We do not provide a "cookie cutter" solution. Instead, based on what we learned from people who suffered disastrous events, we offer an approach that you can use to create your own strategy. We've tried to make the approach one that is simple, cheap, and not very time-consuming, and that can be implemented with limited information from official sources. We know that you will have days, not weeks or months, to rough out the broad lines of your choices and basic strategy. You'll have time, later, to make refinements.

DECIDING WHAT TO DO AFTER THE EVENT IS A PROCESS

Keep in mind that deciding what to do about your business and your livelihood following an extreme event is not made up of a single choice. Instead, it is a process with lots of choices and options at each point. We've devised a flow chart (see p. 58, Chap. 10) that describes an effective way for you to create a custom-built post-disaster strategy that will help you increase your chances of financial survival. It is not a sure-fire way to make your pre-event business work in the post-event environment. To survive, you may need to close the business and do something else. That is, we'd like you to survive financially, even if your business doesn't.

A Word about Soft Paths—There is a fine line between exploring your options and procrastinating. We do not want you to procrastinate, but we do think you should explore your options after the event. When you do take action, if there is a great deal of uncertainty about the environment, we think you should consider taking steps from which you can retreat if, as you learn more, the original idea doesn't seem as good any more. We call this "taking soft paths."

Soft paths consist of actions you can take that are revocable. Hard paths are generally irrevocable courses of action. Pouring concrete and letting it cure is a hard path. Putting down a couple of stepping stones that can be removed if they are in the wrong place is a soft path. We recommend that you use soft paths when you are faced with a shortage of good, reliable information about what is happening and, as a consequence, experience lots of ambiguity about the current and unfolding situation. This almost always happens following an extreme event. Much of the information you get will be erroneous and unreliable. In the face of ignorance and uncertainty, proceed cautiously. Do not take action steps that commit you to things you might easily regret later.

Keep in Mind that You Have Lots of Options— Nowhere is it written that you are obligated to reopen your business following an extreme event. You always have options. Before you rush to use your savings, insurance proceeds, or other assets to reopen your business, spend a little time deciding whether it makes sense. It is important for you to at least be aware of your basic options. Only when you are aware of the choices you can make, can you devise a sensible strategy custom tailored for you.

You could, for example, reopen the same business in the same place. It is just as reasonable, however, to open a new business in a new location or to sell the business or its main assets, or to retire, or to go to work for someone else.

Across the country and over the years, in our travels from disaster to disaster, we've talked with enough people that we have seen each of these options exercised by someone. Most people never think about the alternatives before them: they just pour their remaining assets back into the business, even if it was doing poorly before the disaster. Those who thought about what to do usually did not do a very thorough job of thinking it through. Often, they simply jumped at the first alternative that came to mind. Based on what we saw and the stories we've listened to over the years, we think it is important to your long-term well-being to think through each of the options and to make a conscious choice about what to do and how to do it.

THINGS YOU SHOULD KEEP IN MIND AS YOU MAKE YOUR POST-EVENT BUSINESS DECISIONS

It Is Likely to be an Emotionally Trying Time

If you or someone close to you is injured or killed, if your home and business have become rubble, or if you are spared and those around you suffer greatly, it is likely that you will experience considerable stress in the days and weeks following the event. After the adrenalin is gone and the mess is cleaned up, you are likely to find yourself suffering emotions you may not have previously experienced. Most people do. Making choices in a time like that is a trying experience; however, choices must be made. It is best to be aware that you are suffering the effects of stress and to be particularly certain that what you are planning to do is in your best interests.

Remember Your Fundamental Goals

It may seem right now as though the business is everything to you; it provides your livelihood and helps define who you are. These are important, but it is important for you to keep your fundamental goals in mind as you begin, in those first few hours after the dust settles or the water recedes, to think seriously about what you are going to do now.

Everyone has their own set of personal priorities. Make sure you are clear about yours. How important are personal and family health and well-being? How much commitment do you have to your employees or the community? What constitutes success for you? Is it the business itself that is important to you, or is it the income that comes from owning that specific business? Is it the set of relationships that stem from the business? Would you be just as happy and successful in a different business or a different location?

If the extreme event is big enough and the effects are sufficiently widespread, it will mark a watershed in your life and in your business. The choices you make in those first few days after the event will set the course for a long time to come. That makes it important for you to think about what is most important for you. We don't know your answers to those questions, nor do we suggest that they are easy to answer. What we do know is that those we talked with who seem to have been most successful following the earthquake, tornado, or flood did ask themselves those questions. We urge you, despite your eagerness to dig right in to reopen the business, to think seriously about these fundamental questions, to talk about them with those whose opinion you value, and to make a conscious choice about a post-event strategy.

What's Done is Done: You Can't Change the Past

Sometimes a series of chance events all come out wrong and someone truly experiences something close to the worst-case scenario. Perhaps you had plans to move to a safer building, to change your lease to let you get out in case a disaster made it impossible for you to make a living in that location, or to put a first aid kit next to the cash register, but you just never got around to it. You have to live with the consequences of putting it off. Or, perhaps you took some important precautions, but the event was bigger or more complicated than you thought it could be and your precautions were inadequate. That happens to people, even if they have the best of intentions. After the event has happened, one cannot go back in time to take added precautions. Dwelling on the past, on what you should have done, or what might have been, is not fruitful. Use the past as a lesson, but don't dwell on it. Move on.

Here are the key points:

- First, take simple, cost-effective steps now to reduce the risk that you will suffer losses from the most likely extreme events. Do what you can afford to do with the time and the money you can afford. It is important because you do not know when the event will occur and you cannot take precautions retroactively. Don't put it off.
- Second, regardless of whether you took steps to protect yourself, your family, and your employees before the event, remember, once the event occurs, it is over. There are no benefits to self-recrimination, regrets, or finger pointing. If you let "I wish I woulda" dominate your thinking, recovery is unlikely. Most business people we talked with did not figure out that it was time to move on until one, two, or three years after the event. The earlier you can say, "It is time to move on," the better off you will be.

It is Easy to be Held Back by Self-imposed Limits

The choices you make in those first few days after the event will set the course [for your business] for a long time to come.

Following disasters, people often made choices in the absence of any perceived alternatives. Many failed to see that they had alternatives available to them; in so doing, they limited themselves and their potential response to the disaster. Very few people changed products or services to adapt their business to the post-disaster circumstances. A few people closed their old business and started a new business, though the product or service of the new business was always similar to that of the previous business.

When we first interviewed the owner of a floor covering shop in the Northridge area, we found him sitting in his cubicle at the rear of the store channel surfing – looking vacantly off into space and obviously somewhere else. We interviewed him three years in a row and found him doing the same thing each time. In the last round of interviews, the fourth year, the shop was closed and he was nowhere to be found.

His story is one of one bad thing following another and a complete inability to respond proactively to those events. The building he occupied when the earthquake struck was damaged badly; the rear wall of the structure simply peeled away and collapsed into a small ravine. The sprinklers, installed to protect against fire, were triggered by the earthquake and poured forth water for hours and hours, soaking dozens of rolls of uninsured carpet.

Without a place to do business and without inventory, our hapless merchant struggled to get back in business. He had some carpet stored in another location and that survived undamaged. This, we believe, he tried to sell door to door from the back of a truck – since he had no shop.

The merchant applied for an SBA loan and was turned down. So there he was. The rebuilding of Northridge had begun. Large carpet wholesalers from across the country were swarming over building

> Following disasters, [business] people often made choices in the absence of any perceived alternatives. Many failed to see that they had alternatives available to them.

contractors like ants on a picnic dessert, offering spectacular deals for large lot orders. Our merchant had no inventory to sell, wasn't positioned to compete with large wholesalers, and had not yet found a place into which he could move what was left of his business. The giant rebuilding boom passed him by.

Once new carpet is installed in homes and offices, barring major accidents, it doesn't have to be replaced for years. Most of Northridge was re-carpeted following the earthquake. After that rebuilding, the carpet and floor covering market dropped precipitously. In five or six years, demand would climb up toward normal replacement levels, but for the next few years, demand for new carpet would be minimal.

The chain of events set into motion by the earthquake, the loss of inventory, the lack of a place from which to do business, the intense competition from large, out of region businesses, and the precipitous market decline were too much for this fellow to overcome. It caught him unprepared and faced with overwhelming odds. No wonder he spent most of his time staring vacantly at the television in his cubicle, absent-mindedly channel surfing.

Are there things he could have done ahead of time to protect himself? Of course. He could have had insurance and he could have located his store in a building that did not have the back half built on landfill. After the event, he could have moved more quickly to find another location and to contact his suppliers to get carpet in to meet immediate demands. He could have worked more aggressively with small building contractors. Unfortunately for him, he was simply overwhelmed by the event and its consequences.

On the other hand, a young owner of a brake and transmission repair shop was one of the few people who refocused his "product" two weeks after the disaster. In 2000, he told us he was doing five times

PEOPLE WHO ARE CLOSE TO RETIREMENT AGE FACE PARTICULARLY DIFFICULT CHOICES

At some point, for people who experience a natural disaster, the disaster becomes extremely personal. The full sense of personal disaster is particularly clear to the business owner who is at or near retirement age when the disaster strikes. The results of a natural disaster can significantly influence business and retirement decisions long after the disaster event.

Small business owners often consider the equity in their business as their retirement nest egg. They expect to realize the equity by selling the business or by taking a draw from the business, which, following their retirement, would be managed by a family member, an employee, or a lessee. In many small businesses, few employees are capable of managing or trained to manage the business. It seems that fewer and fewer children have an interest in taking over their parents' business. Under these circumstances, the owner sees selling the business as the only way to recover equity and retire with some level of security.

We listened to many business owners whose retirement became impractical or postponed because of the direct and indirect

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the business he was doing before the earthquake in 1994. He had changed his business to focus on another automotive emphasis that brought him customers from a three-state area. The earthquake triggered the basic change in what he was doing and how he was doing it. He was an exception; most owners followed the old ways blindly, doing the same thing the same way.

After Hurricane Andrew, a South Florida mortgage lender dissolved a business that had grown to three offices over the previous ten years. Two years after the hurricane, with a partner, he was able to open a new mortgage business at two locations. He told us it was the only thing he knew how to do.

Some of the people we talked with thought about not reopening their business after a disaster, but many had trouble envisioning an alternative way to make a living. Others found themselves responding to pressure from others: neighboring business owners, community leaders, or family members. During and following the 1998 floods in Montezuma, Georgia, the town's business people met to discuss courses of action.

Overcoming adversity and reestablishing Montezuma's downtown business district became themes of these meetings. Working to restore Montezuma's businesses became a collective goal, which made some business owners feel they were obligated to reopen their business. Several of the people we talked with had serious second thoughts about the business decisions they made, largely as a result of the informal pressure placed on them at the meetings they attended.

A few owners who did not reopen after a disaster, in fact, made sound business decisions. Other owners who did not reopen their businesses were faced with special circumstances. For example, some were about to retire anyway, the family came undone, it was a retirement business, the suppliers made demands they could not meet, or they were unable to find acceptable financing.

A jewelry shop did not reopen after the 1999 Tarboro River floods because the owner had been considering retirement for some time. The flood forced his decision.

The owner of a sporting goods store, also flooded by the Tarboro River, had several reasons for not reopening. He could not get rid of the unpleasant protein odor from the flood-soaked animal feed he stocked before the flood. Also, he had already retired twice, owned part of another business, and was unwilling to put up his house and farm as collateral for the loan he needed to reestablish the sporting goods store. He decided not to reopen what had been a very successful business before the flood.

An auto dealer with locations on both sides of the Red River closed the one site that flooded in 1997 flood. The decision to not reopen the flooded location was encouraged by the auto supplier. They wanted him to "put all his cars under one roof." We think that it was a good thing he had not "put all his eggs" in the facility that flooded.

Immediately after a disaster, most owners do not think about whether or not they should try to keep their business open. Instead, the issue they are concerned with is "How do I get my business open as fast as possible?"

Those who survive extreme events and develop post-event financial viability are those who come up with a new strategy that works in the new setting. Sometimes, they stumble on those strategies by accident. Other times, the new strategy is the result of thinking the situation through, understanding the changes that are taking place in the market or among suppliers, and devising a way to flourish in that new market.

Don't Use Financial Resources Imprudently

Business people we talked with attempted to finance their business recovery with personal savings, family loans, personal credit cards, bank and SBA loans, grants, insurance proceeds, the sale of remaining assets, and even lottery winnings. For small business owners, few grants are available and federal loans must be collateralized to the extent you have assets to cover the loan. Several people we talked with "maxed out" their own and their relatives' credit cards. Others used their life savings to finance their business recovery.

People who rushed to reopen their business after a disaster often found themselves very short of customers and faced with a resulting cash flow squeeze. People who were too deliberate about reestablishing their business sometimes found their customers' buying habits had changed. This also resulted in a cash flow squeeze. In either case, there is an often-overwhelming temptation to hang on until things get back to normal. In the meantime, savings and loan proceeds dwindle, frustration and anxiety mount, and hope becomes despair.

Before you rush to cash in your IRA or sell the family jewelry or silver in an attempt to bring your business back, think about what that money is for and make a considered judgment about how you want to use it. If you have insurance proceeds to replace equipment or inventory, you will probably be tempted to use some of it for current cash flow. Be careful of that. In short, don't rush to use up your business assets, personal savings, or your credit without a sensible post-event business plan.

Don't Assume That Things Will "Get Back to Normal"

The implicit premise of nearly every business owner who reopened (or attempted to reopen) his or her business after a natural disaster was that things would "return to normal." We found some exceptions, including opportunists looking for a short-term windfall at the expense of disaster victims (and we interviewed a few of them).

In case after case, the hope or confidence that things would soon get back to normal belied the reality of post-disaster dynamics. A few of the people we talked with had lived through previous disasters. Their experience may have prepared them better cope with the recovery process, but they still expected everything to get back to normal.

Essentially every business owner we listened to was driven by the belief that some "normal" condition was not only possible, but would be realized. In search of normalcy, people drew down life savings, acquired debt, and "maxed out" credit cards. It seems that once the assumption that "things will get back to normal" becomes a goal, choices are constrained, and limits are self-imposed.

Everyone thought they could "go home again," but, in every community we visited, return to what existed before the event – return to the ***status quo ex ante*** – became an unrealizable quest. Simply restoring utilities and roads and repairing and reconstructing buildings did not "bring things back to normal." People had moved away, buying habits changed, lives were altered, new people moved in, and patterns and relationships were forever altered. The systems and subsystems that comprised the community and the businesses' environment had changed forever.

Those who see interrelated phenomena as systems are not surprised when communities change following a natural hazard event of some consequence. Any major event with impacts on an existing set of relationships is very likely to effect permanent changes in those relationships. In the case of business recovery, those changing relationships are particularly important.

We saw changes in communities as a recurring theme across states and across disasters. There were demographic changes, with some groups moving out from the affected area and other groups moving in. Population density was sometimes redistributed within a jurisdiction, depending on state and federal buyout programs or widespread destruction of residences. The demographic changes contributed to changed locational relationships. These were exacerbated by post-event decisions about private and public choices about what and where to rebuild.

We saw post-event community changes everywhere we went. They were particularly visible in South Florida,

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effects of a natural disaster. For small business owners, walking away from the business they have owned and operated is difficult under any circumstance. However, as the owner approaches normal retirement age, it becomes especially difficult if the owner cannot recover a reasonable part of the financial equity invested in his or her business.

If you are at or near retirement age, be particularly careful about pouring your life savings back into the business to get it up and running again. The business simply may not work out in the new setting. Sometimes, you just have to take the loss and walk away without pouring good money after bad. We saw far too many people in their sixties and seventies who lost assets during the event and then put everything they had back into those businesses in the vain hope that they would, once again, generate a living and could sell the business to provide retirement income. Most of those people are now working for someone else.

Northridge, and Princeville. Homestead, Florida, and its neighboring communities changed forever following Hurricane Andrew; the city is still there, but it is an entirely different place from what it was before the Hurricane struck a decade ago. Northridge had major population changes, even though the physical artifact looks much as it did before the earthquake. Princeville, a virtually all African-American municipality on the Tar River was essentially wiped out. Many of the people who lived there are gone forever. Much of the town is still deserted and many of the flooded-out homes remain, windowless, overgrown, and deserted.

Customer buying habits are subject to change anytime. It is an ongoing process, but . . . is punctuated, often accelerated, by disaster events. Business owners understand that there may be significant changes in [customer] buying habits; however, they seldom factor this knowledge in their disaster recovery decision-making process.

It is difficult to overstate the significance of community changes for small businesses whose customers are drawn exclusively or primarily from affected areas. It is also difficult to overstate how seldom small businesspersons understand the implications of those changes for their businesses and respond accordingly.

In Montezuma, the flood and the circumstances that followed accelerated changes in consumer buying habits. Like most other small communities, shoppers there had been driving to big name chain and discount stores in a larger, neighboring town for their major purchases, for clothing, and even for groceries. Customer buying habits are subject to change anytime. It is an ongoing process, but the ongoing process is punctuated, often accelerated, by disaster events. Business owners understand that there may be significant changes in buying habits; however, they seldom factor this knowledge into their disaster recovery decision-making process.

The exodus that began with the loss of aerospace/defense jobs before the 1994 Northridge Earthquake continued after the earthquake as people without a job-related need to stay in the area moved away, leaving their damaged homes and the prospect of future earthquakes behind. With the repair and rebuilding of damaged buildings, houses, and apartments many of the people who moved into the area were Koreans and Hispanics, many of whom had recently arrived in the United States. The demographics changed significantly, yet only a few business owners anticipated the impact these changes would have on their customer base and adapted their business operations to the meet the changed demographics.

In Homestead, Florida, after Hurricane Andrew accelerated final closure of the Homestead Air Base, most middle class military retirees left the area. As military retirees, services offered at the Homestead Air Force Base had been available to them. After the base closed and the hurricane wiped out most of the city, most retirees had no compelling reason to stay, so they left South Dade County. They were replaced by an influx of low-income households that moved in primarily from Miami and other communities in Dade County. Small business owners used the demographic changes to explain their situation eight years after the hurricane. Only one or two of the people we talked with reported making significant changes to their business operation in response to the changed demographics.

In Los Alamos, New Mexico, after the May 2000 fire that forced the entire town to be evacuated, business owners saw more and more people dining, shopping, and living in Santa Fe and even Albuquerque. But this trend began long before the 200 or so buildings (400 homes) were destroyed by fire. The mountain highway between Santa Fe and Los Alamos had been widened to four lanes and greatly improved, turning the once-onerous trip into a thirty-minute commute. In addition, work schedules at the Los Alamos National Laboratory had been changed to permit workers to complete their workweek in four days and the Laboratory had added a large cafeteria on-site. Overall, the changes made it easier to go shopping away from Las Alamos and less convenient to eat lunch in downtown Los Alamos. The fire aggravated an already declining customer base. Los Alamos is a small, one-business town, and most business owners were aware of their diminishing customer base. Some owners adapted their products and services to the changing business environment. Almost everyone we talked with was worried about the future of his or her business even before the fire. ◆

Chapter 10 | DEVELOPING YOUR OWN SURVIVAL STRATEGY

In the days, weeks, and months that follow the extreme event, you will need to make some important decisions. The extreme event may itself have been a disaster for you. If you lost a loved one or lost absolutely everything, then you've already experienced a disaster. If what happened to you is less than that, you need to make prudent choices to make sure that the extreme event does not become a disaster for you personally.

You will want to ask and answer important questions about yourself and those you care for. You will have to learn what happened and what is happening to the business: the business place itself, your customers, your suppliers, and your location. You will want to list all your options and decide on a strategy that makes the most sense for you.

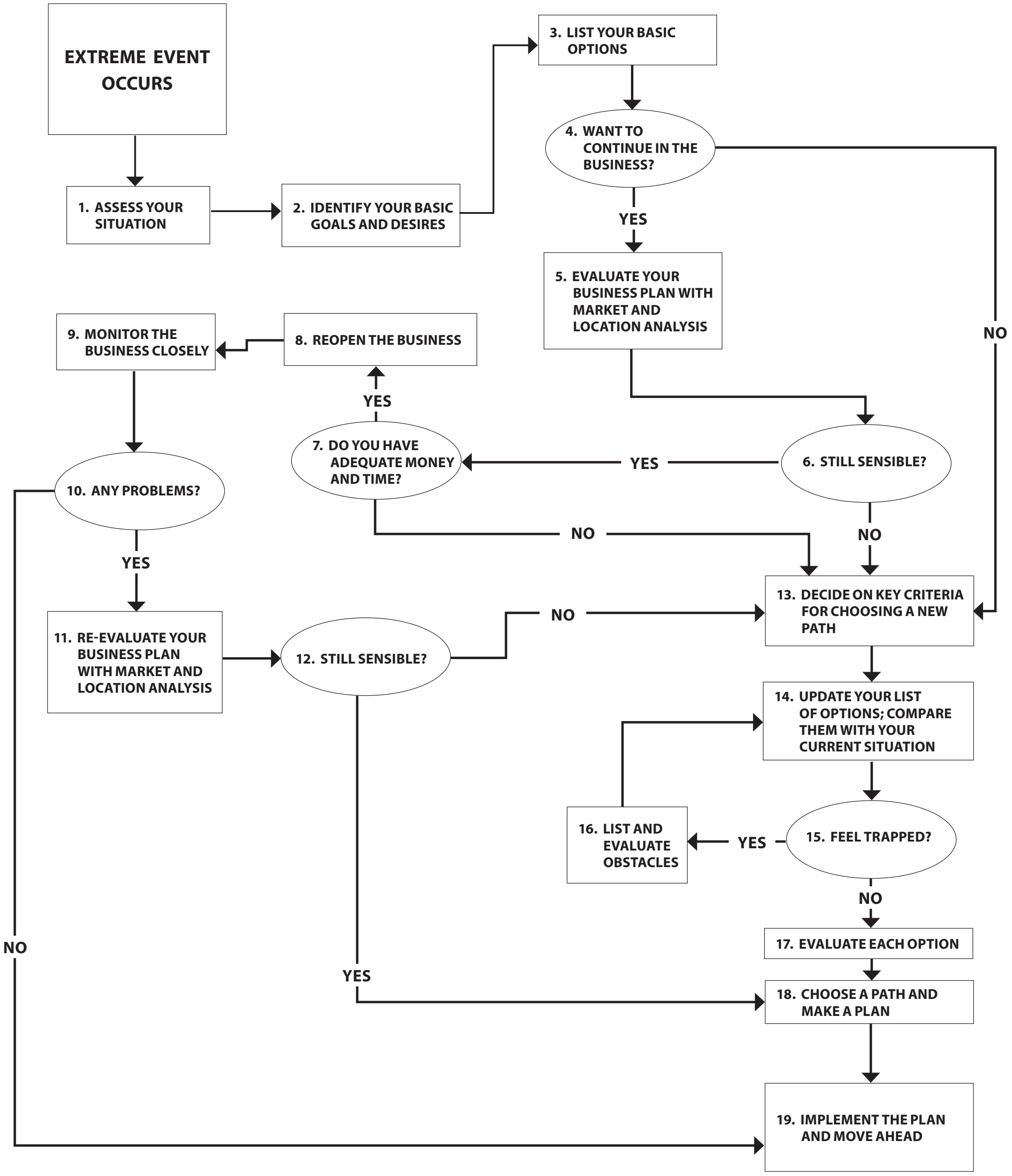
In this chapter, we outline a process that we think will be helpful to you. The following pages focus on how to develop your own strategy for post-event business or financial survival. Some may find it useful to follow along with ***Figure 1, Deciding on a Strategy for Post-Disaster Survival***. At first, this figure may appear confusing. If you simply follow along with the narrative, however, working through the tasks and answering yes or no when called on to do so, you will find that it is logical and straightforward.

We recommend you go through the process ***before*** you use your life savings or credit to reopen your business. After you have spent all your money and find that the old business does not work in the new environment, you can wish you had not done it, but it will be too late. Keep this material handy and review it from time to time. Know how to put your hands on it after the fire, earthquake, flood, riot, bombing, or tornado.

1. IN THE AFTERMATH, ASSESS YOUR PERSONAL SITUATION

This is the starting point for developing your strategy: assess the initial consequences of the extreme event as they relate to you and your business. In the first few hours after you are able to do so, it will be natural for you to want to get to the business place as quickly as you can after the event. You'll want to know how much damage occurred to the building, inventory, equipment, and business records. You'll probably want to salvage whatever remains of value and find a safe place to store it, at least temporarily. In the next few days, it will be important for you to begin your assessment of the impacts of the disaster on your business. Do not assume that things will get back to normal either quickly or ever. Get first hand information so you can make prudent judgments about your own future.

FIGURE 1. DECIDING ON A STRATEGY FOR POST-DISASTER SURVIVAL



What Is Your Personal Financial Situation and Risk-Taking Posture?

It is understood that your post-event financial position has a lot to do with what options are available to you. Consequently, an important part of your personal assessment after the event is to learn where you are financially. What is your net worth? Are your assets liquid or locked up in long-term investments? How much do you have stashed away for retirement or for business ventures? How much of your losses from this event are really covered by insurance? By that, we mean you have to learn whether your policies really covered the type of loss and the amount of loss and whether your insurance company is sufficiently solvent to fully pay claims resulting from the disaster.

At the same time you are taking stock of your financial position, take stock of your risk-taking posture. Young people and the well-to-do tend to be in a better position to take financial risks than people who are close to retirement age or who have relatively few resources. Some of us are willing to take considerable risks and others of us are not. Sometimes, we are willing to take some kinds of risks and not others. One of the authors, in discussions with a boat dealer while shopping for a sailboat, was told by the dealer that he, the customer, appeared to be a "tuna sailor." When the prospective sailboat buyer looked puzzled, the boat dealer explained, "chicken of the sea." It was a good observation and led the author off on another quest for something that better matched his temperament. Before you invest a lot in a sailboat or reinvest a lot in your business, you had better have a pretty good idea of whether you are a "chicken of the sea." "Don't wager more than you can afford to lose" is good advice.

Identify Limits You May be Placing on Yourself.

One of the most frequently heard comments when we asked business people if they had thought about doing something different in terms of business after the event was "What else can I do? This is what I do." The people who survive and flourish following extreme events are the ones who, after the event, did not blindly begin doing just what they did before it. They look around to see if it makes sense to continue and to open their minds to new options. It is important to remember that survivors are those who continually adapt to new circumstances. *(See Chapter 9 for a more extensive discussion of this important topic.)*

How About You? Are You Up to It? Are You Able to Give What it Is Going to Take?

It takes a lot of energy and commitment to start a new business. Chances are you remember just how much it does take. You've done it. Remember that, following a real disaster, it usually takes that same level of commitment and energy to revitalize a business that suffered from it. Ask yourself whether you still have what it takes to do it again.

This should almost go without saying: if you are not in good health, if you have been injured, or if the disaster has caused you severe stress and anguish, it is important to think seriously about whether you are up to reopening right now. Get advice from a physician if you have any questions about it. Lots of people suffer severe stress following a disaster even if they themselves do not recognize it.

Following any extreme event, people are quick to seek medical help for physical injuries. They are less likely to seek help for emotional and psychological injuries, even though it seems to us that they occur perhaps more often than physical injuries. We have found that, long after the scars on buildings and the land are gone, deep personal scars remain in many people. People who experience extreme events often suffer from posttraumatic stress disorder, from extreme stress, and from depression. It usually doesn't show up right away, but you need to know that there is always a chance that one of these diseases will strike you or someone close to you. It might not show up for months or, perhaps, even a year or more. Be watchful and, if there is any indication, get professional help.

Watch, particularly, for the effects of stress on your decision making. Extreme stress makes it hard to concentrate and has a tendency to make it more difficult for us to make distinctions between what is important and what is not. In an effort to reduce stress, people sometimes make unwarranted, harmful assumptions and leap to decisions that lock them into courses of action they later regret.

2. WHAT DO YOU REALLY WANT TO DO?

Once the dust has settled or the mud is beginning to dry, it is time to ask yourself what it is that you really want to do. What are your basic goals? Do you want to continue in the same business in the same location or are there better ways of getting to where you really want to be? There are several very legitimate reasons for not wanting to do so. First, you may simply not want to go through all the effort required to reopen and rebuild the business. It is likely to be time-consuming and hard work. You have already done it and you may not feel you want to do it again or that you are not up to doing it again. There is nothing wrong with that.

Second, you may be at or near retirement age. Even if you were counting on selling your business to feather your nest egg, you may still be in a position to retire or to enter semi-retirement, even without selling the business. Reopening the business may require that you put all your savings at risk with absolutely no guarantees that things will work out. Sometimes, a bird in the hand . . .

Third, perhaps the business wasn't doing all that well before the disaster. It may be that competition has become so fierce in your business or your town that profit margins have been driven down to the point where it makes little sense to put in all that effort for so little return. Or, it may be that your customers have moved somewhere else and what used to be a good location is not as good any more. Perhaps others are replacing your services or products and the future was not particularly bright even before the disaster. For many kinds of retailers, the large discount chain stores have made survival tenuous even under the best of circumstances.

Fourth, it may be that your business would do much better in a different place or that you could modify your business to take advantage of a new niche that is opening or has opened. In that case, staying in the same business in the same place represents high "opportunity costs." That is, you could be doing a lot better doing something else.

Fifth, perhaps you live in a northern city and can't stand winter or a southern city and can't stand the heat. The disaster may be just the nudge you need to go someplace where you will be happier and more comfortable. Hurricane Andrew destroyed one man's business place. He decided he would be happier away from hurricanes and south Florida. He is now in the Tennessee mountains where he owns and operates a web-based business. He is living where he wants to be and is making a good living.

If any of these conditions apply to you, then it makes sense to reevaluate your situation. There is no special merit to letting a business bleed you to death. It makes sense to think about your goals and values; about what it is you really want to do with your life. Talk it over with those who matter to you. The disaster could turn out to be the chance you need to start to live your real life.

3. IDENTIFY YOUR BASIC OPTIONS
and
4. DECIDE WHETHER YOU WANT TO CONTINUE WITH THE PRE-EVENT BUSINESS

List Your Basic Options

It may look to you, right after the disaster, that your only option is to reopen the business as fast as you possibly can. As we have said before, that could really be a big mistake. Rather than leaping at that one alternative, take a few hours to realistically evaluate your alternatives and to decide whether it makes sense to reopen right now. You usually have some options available following a disaster. Here is a partial list:

1. Reopen the same business in the same place either right now or in a little while:
    - Tweak the business plan to meet new challenges and opportunities.
    - Provide protection against the next extreme event.
2. Open a "new" business:
    - Open a new business in the same place as the old business.
    - Open the old business in a new location.
    - Open a new business in a new location.
3. Close, sell, transfer, or liquidate the business and do something else:
    - Retire.
    - Semi-retire and:
    - Work for someone else in the business.
    - Work in a new business.
    - Get a job working for someone else.
4. Walk away from the rubble and don't look back.

Successful survival sometimes means moving on to some other business or some other career. Remember, if you were properly insured, you will have more options. Talk with your spouse or someone else in whom you feel comfortable confiding to identify and explore options. We've interviewed some very happy people who decided to change their business, move to a new location, retire, or keep their insurance proceeds and go to work for another organization.

5. EVALUATE YOUR BUSINESS PLAN
and
6. DECIDE IF IT IS STILL A GOOD ONE

It may look to you, right after the disaster, that your only option is to reopen the business as fast as you possibly can. That could really be a big mistake. Realistically evaluate your alternatives and decide whether it makes sense to reopen right away.

It is important to make an honest effort to objectively understand what happened and what is happening to your customers, suppliers, and competitors as a consequence of the event. This is a difficult assignment because everything will be in flux, surrounded by ambiguity and changing rapidly. Information will be unreliable. One quick look around will not be enough. The problem is that you need accurate, reliable information on which to make sensible decisions about your business in the post-disaster environment and that is not easy to come by. You will have to engage in a continuing effort to learn what is going on in your neighborhood, your business community, and your local jurisdiction and interpret that information so you can use it to make good business decisions.

If you have any questions at all about the wisdom or desirability of reopening your old business in the same location, it is time to re-evaluate your business plan and conduct market and location analyses. Even if you do not have a written business plan, somewhere in the back of your mind you have a plan or a concept that you use to help guide your business decisions. Your evaluation does not have to be an elaborate, highly sophisticated activity. It can be simple and straightforward, but it does have to be conducted with your eyes wide open. You can get help from SCORE, a Small Business Development Center, your banker, or any of a dozen good reference books.

In the following pages, we suggest what we think are critically important elements of your post-event analysis.

Gather Necessary Information

You need to develop an estimate of how much effort, money, and time will be needed to reopen the business. Would you have to find a new building? Buy new equipment? Replace some or all of your inventory?

You will also need to assess what, if anything happened to your customers, your suppliers, your key employees, and your business location. This is a part of strategy building that most people will find difficult. It will require a little ingenuity on your part, but it is critically important to your financial survival. Your job is to learn what the effects of the extreme event have been on those "outside connections" that matter most to your business.

Disaster's effects on suppliers—Here's the key point. If you are heavily dependent on a single supplier and that supplier is put out of business by the event, then you have to find a new source of supply quickly if your business is going to survive. Arrangements would have to be made with new people at a time when you are not in a particularly good bargaining position. The challenge is not to commit to a deal that you will not be comfortable with later.

Call your key suppliers to learn the extent to which, if any, they were damaged or lost their ability to continue to provide you with the materials you need to do business. If they are outside the damage area, it is likely they will be largely unaffected. If they are unaffected, you might tell them about damage you received to inventory or materials. We've seen many instances where the supplier has helped out generously. Learn whether they can help you out if you choose to reopen. Many people we interviewed received help from their suppliers in the form of extended credit, shipments to them from suppliers of overruns or excess supplies, and the like.

> It is important to make an honest effort to objectively understand what happened and what is happening to your customers, suppliers, and competitors as a consequence of the event.

Disaster's effects on customers—Whether it makes sense to reopen your business depends largely on what happened to your customers as a result of the event. If all or most of your customers suffered large losses as a consequence of the disaster, there is little point for you to reopen quickly unless you have something they need desperately or can get new customers in short order. For example, it usually makes sense for lumberyards and building supply, pharmacies, physicians, furnishings and appliances, construction, dry cleaning and laundry, and grocery stores to reopen quickly. However, if you sell goods and services that come from discretionary money, your customers may not be able to afford what you have to offer as they attempt to pick up the pieces. If you provide professional or retail services and most of your customers come from the damaged area, you will have some problems even if your business was not damaged. Unless you provide materials needed for cleaning up and repairing damaged structures, or provide other essentials, your customers will be busy doing other things instead of buying from you. Cash they might spend on discretionary items will slow to a trickle; that money will be needed if they are suddenly unemployed because of the event, to meet the deductible on their insurance, to replace uninsured items, and to meet all the extra costs associated with damage to one's home.

For those of you who make your living from other people's discretionary income, the rush to reopen may be a very serious mistake. It is particularly important for you to find out just what happened to your customers. You will need to come up with an action plan for finding out how many are moving away from the area and how many of those who stay will be able to afford your goods or services in the foreseeable future. If you have a mailing list, that is a good start.

Sometimes, most of your customers move away. In that case, reopening is like starting over. It is time to make a new plan.

If you are in manufacturing or wholesaling, it is likely that your customer base is geographically dispersed. Only a few of them may have suffered losses from the event. In that case, it is important for you to do what is necessary to ensure that you meet your customers' continuing needs.

If you did take significant losses and will have to be closed for some time, it is important to learn what your customers are doing in response to your situation. If your customers did not suffer major losses, they may already be buying from someone else and you may have to fight an uphill battle to win them back. Do your customers still want or need your product or service? Can they afford it?

All this means it is important to learn what has happened to your customers. If you have only a few customers, this will be relatively easy. If your customers are spread across the region or are national or international, you probably need not be particularly concerned about the impact of the local disaster on them. What you will have to be concerned with is whether they will stick with you until you are able to get back to providing your materials, goods, or services. If your customers work on a just-in-time basis and you are unable to deliver, then you have real problems. They will seek other sources of supply unless they are able to continue without your services for as long as it takes you to get back into production.

Disaster's effects on employees—Have your employees moved away? Been injured or disabled? How long would it take to replace those who do not want to or are unable to return to work? What might it take to retain key employees?

Disaster's effects on competitors—Following the Northridge earthquake, construction contractors, floor-covering firms, and the like flooded into the area to take advantage of a short-term, but presumably lucrative market. Local firms that were not able to position themselves fast enough lost out. If your firm has had significant damage and your competitors have not, then you need to know that and make a hard-nosed estimate of how much market share you will have lost by the time you get back into business and how difficult it would be to recover it.

Assessing Where Your Business Was Before the Event

Having just taken a fresh look at your customers, suppliers, employees, and competitors, you will be in a good position to make a realistic assessment of just how strong your business was before the event occurred. Were you just hanging on with few prospects for growth? If so, it is probably time to make a new plan. If the business was starting to take off, the old plan may work, depending on what happened to your customers, suppliers, and competitors. If the business was providing you with a decent, or even a great living, it is still time to evaluate whether the business will work in the new, post-event business environment.

Only you will know how strong your business was before the disaster. If you were losing out to the competition before the disaster, there is no reason to believe you can do better after the disaster. If your firm was doing well, growing and becoming more profitable each year, chances are you can do well after the disaster, provided you can retain your customers in the unsettled times after the event.

Even if your organization was doing well before the disaster, it is important for you to take a hard look at where your firm is with regard to dominant trends in the area where you do business. Retail patterns do, of course, change. Small town, downtown merchants are having a tough struggle against giant chain retailers located at the edge of town. If your firm is positioned favorably with regard to industry trends, your chances of surviving a disaster are much better than if your firm is in an uphill fight against major trends. It is important to know how your firm is positioned with regard to the dominant trends in your industry. There is absolutely no point in investing your assets in a business that is doomed from the start.

Does Your Present Location Make Sense To You?

Does it make sense for you to reopen your business in the same location in the post-event environment? Is the building usable? If not, how long before it can be used? Are other buildings available either for temporary use or for a longer term?

Has the location lost or gained in value for your business? If your business is location-dependent, then it is important to know whether the pre-event location still has the desired characteristics. Is the mall still there? If you have a business dependent on the waterfront, beachfront, scenic overlook, or special attraction, are they still there and will they be there next week or next year? Locational relationships frequently change; don't let a big change in locational relationships leave your business hanging out to dry.

Just How Bad Was It?

The wildfire that swept through parts of Los Alamos, New Mexico, made approximately 400 families homeless when it burned about 200 buildings. Los Alamos, however, was back in business just a few weeks later. The fire was a disaster for those who lost their possessions and homes, but it was not a knockout blow to the community. Most of those affected directly stayed in the community, doing, after the fire, what they did before it. Long-term effects on the community were difficult to detect except in the cases of a few homeowners and businesses.

Homestead and Florida City, Florida, on the other hand, were absolutely flattened by Hurricane Andrew. Neither tree nor power pole could withstand its force across a 35 mile wide swath of southern Dade County. Hundreds of houses disappeared. A major employer, an Air Force Base, pulled out. People left the area in droves and didn't come back. The municipality had almost no remaining tax base. A decade later, the community still had not developed an adequate tax base even though the physical scars of the hurricane on the landscape are mostly gone.

Your job is to assess (as objectively as you can) where your community's disaster lies between these two extremes. If it is closer to what happened in Los Alamos, the community is more likely to bounce back quickly, even though it will be very tough for some members of the community. If your area looks more like Homestead and Florida City after Hurricane Andrew, then you can safely conclude that community recovery will be slow and difficult and that most businesses, especially those with local customers and suppliers, are going to have a tough time.

Consequently, you need to look around and ask some hard questions. How devastating was it? Was there total devastation or limited damage? Was the damage confined to a relatively small area or extremely widespread? Where did it occur? Who suffered the most damage? Reasonably speaking, how long do you think it will take the community to get the power, gas, water, sewerage, streets and bridges back in working order? Can you get to your customers? Can your customers and suppliers get to you?

The reason for this assessment is to get some useful information about what the community recovery process might be like. If only a few homes and businesses are devastated, compared with the whole community, it will be tough on those families and businesses, but the community is likely to spring back fairly quickly. If lots of places suffer just a little damage, the community is likely to spring back fairly quickly. If, however, there is widespread, severe damage, recovery is going to take a long time. If your business depends on customers from the community and you do not sell things that are critically important following a disaster, your business recovery could take a very long time.

Some people will leave the disaster area and some will leave the community. You need to learn how many are staying and how many are leaving. At least, you will want to know whether your customers and suppliers are staying or leaving, if your customers and suppliers are local.

You will also want to ask yourself about the likelihood of such an event happening again. If the event was a 100-year flood, the chances are one in 100 or so that it will happen in every succeeding year. Tornadoes do strike twice in the same place. There are always hurricanes on the Gulf Coast and the South Atlantic States. Dry places are always subject to wildfire. How likely is it to happen again? Do you want to be there when it does?

Does the Old Business Plan Still Make Sense in the New Environment?

Perhaps the most important decision you will have to make in the first few days, weeks, and months after you are able to get back into the business is whether your pre-event business plan makes sense in the post-event business environment. You will face at least two major hurdles in making the decision. The first is that, unless you were having second thoughts before the disaster, chances are that you will find yourself emotionally tied to the old business plan and assume that it will work. It is better to assume that it will not work and then try to prove to yourself, as objectively as possible, that it will work.

The second major hurdle is that it is very difficult to tell what is happening in the community after the event and to then project that into the future. Almost everyone will be telling you things that assume a return to conditions that existed before the disaster. Few people will understand that, if the event is sufficiently devastating, there is no possible way for the community to return to what was beforehand. You will have to do your own analysis or talk it over with others in the community who you think are good observers of change. Remember this: disasters typically accelerate changes that are already in process. If your downtown was declining before the flood, chances are it will decline even faster after it. If your customers were moving away before the earthquake, chances are they will move away even faster after the earthquake.

If you have been able to answer the key questions about markets, suppliers, competitors, and location, you will be in a good position to assess whether your old business plan still makes sense, given the changes brought about or accelerated by the disaster event. Sometimes the plan may take just a bit of tweaking to be viable. Other times, it makes more sense to simply abandon the plan and to consider your options.

If it still makes sense to open the business, you will want to do an assessment (See step 7) as to whether you have sufficient resources and time to reopen and, if so, when you should reopen. If it does not seem to you that it makes good sense right now to reopen, then we suggest that you proceed to step 13, Decide on Key Criteria for Choosing a New Path.

7. DO YOU HAVE ADEQUATE TIME AND RESOURCES TO REOPEN?

If you believe your pre-disaster business plan still makes sense in the conditions that are emerging after the disaster, then you need to learn whether you are able, sensibly, to get back into business in time to save your market share, to meet your income needs, or to take advantage of business opportunities that may have been created by the disaster.

When Should You Reopen?

A first question has to do with when you should reopen. Reopening right away makes sense if there is a ready market for your goods or services, if you have a site from which you can do business, if you can get necessary supplies and inventory, and if you and your employees are ready to do so.

Immediate market potential—What is the immediate market potential? Chances are, if the damage is widespread, there is not much of a market for jewelry, art, or other items that come from discretionary income. Building materials, pharmaceuticals, fast foods, groceries, and the like will be in great, immediate demand and it usually makes sense to reopen. If your customers are out of the region and were not affected directly by the event, it makes sense to reopen.

Costs and immediately available resources— How much will it cost to reopen immediately? If it is going to take a significant share of your life savings, then be careful about the rush to reopen. If, however, you can reopen for a small amount of money, even in a temporary location, it might make good sense to do so. You will want to meet with your insurance agent early on to learn how much of your losses were covered and to get an idea of how much money you can expect to receive from your claims and when you can expect to receive it.

Availability of materials, inventory, and production processes— If you can get inventory, raw materials, or other products in your line easily, it may make sense to reopen now. Sometimes suppliers will rush to deliver you materials to help in your recovery. If your production facilities are badly damaged and will cost a great deal to rebuild and take a long time to put back in operation, the rush to open is usually not a good idea, unless you have inventory that can be shipped or make other arrangements for production.

> If, after you reopen, your business encounters problems that may be related to the disaster, then it makes sense to reevaluate your business plan.

If any of the conditions described above do not apply to you, then it makes sense to think seriously about deferring reopening until the "right" time. Here are some questions to help you decide when the right time is.

Can You Get Back in Time? How Much Did You Lose and Where Will the Money Come from to Reopen?

Where there is opportunity for profit, outsiders will descend on your town and your customers. If you are going to go back into the same business, you have to be able to deliver in time to stave off competitors and to keep the customers you had before the event. Unless you can do that, there is little point to reopening.

If your building or surrounding businesses are damaged, you need to know whether you will have occupancy in time to meet your business needs. Landlords who are struggling with insurance companies or who are uncertain about their own futures will make your life miserable. While we don't encourage people to break contracts, we must point out that we saw many small businesses just walk away from lease commitments in damaged buildings or shopping centers to find new space. None of those we talked with was sued or suffered adversely because he or she walked away from property damaged by the event. If you are going to move, do it right away, but do not move to a new location unless that location makes a lot of sense for your business.

If you suffered losses and were not insured, where will the money come from to reopen? Most business owners we talked with used their life savings, borrowed from relatives, used their credit cards, got a little help from suppliers and/or customers, or got loans through the Small Business Administration or from conventional lenders. A few got loans or grants from local government. Do not expect any money from FEMA, the Red Cross, or other disaster assistance organizations – small businesses and small business owners usually are not eligible for that kind of assistance.

Before you decide to use your life savings or borrow money from organizations that require you use your home and other personal assets as collateral, it makes sense to take a very serious look at your business prospects in the post-disaster environment. Even if your old business plan still makes sense, you may not want to reopen or re-launch it. Often, reopening after a major disaster is like starting a new business. If you had a good business before the event, banks and the SBA will probably be willing to loan you money to reopen based on your experience before the disaster. However, before you make that commitment, make sure you have a solid business plan for the post-disaster environment and make sure you are willing to risk what they will want you to put up as collateral.

Understand fully that things will never be the way they were before. Last year's business plan is likely to be absolutely dead and could mislead you more than help you. Make sure you have a new feasibility analysis and rebuild your ***pro formas*** and cash flow analysis before committing any cash to the new venture. If you can reopen without putting any significant amount of money into the venture and you have good reason to expect your customers to be there, then go ahead. But, unless you have a service or product that people need desperately, expect that, for a long time, your business will not be what it was before the event.

In any event, it makes sense to be cautious. Be cautious about how you use your insurance proceeds; don't confuse cash flow with investment. Be wary of taking loans that require you to use personal assets, like your home, as collateral. Be wary of taking loans that will be forgiven if you stay in the same business in the same location. You may be far better off moving.

If you are at or near retirement age, you will want to think particularly carefully about reopening the business. Many people we interviewed put their savings back into a business that did not survive the next five years. You may be better off liquidating your business assets and putting your money in safer investments. Sometimes, even if your alternatives look bleak, it still makes sense to walk away.

> If circumstances have changed because of the disaster . . . then going back into the same business in the same place . . . could be tough.

If reopening the business in the view of costs and timing does not make sense, no matter how good the concept is, go to step 13, Deciding on Key Criteria for Choosing a New Path.

8. REOPEN THE BUSINESS

If it makes sense to reopen, reopen on the schedule that makes sense for you and your business. Reopening too soon for your customers typically means that your resources will be drained down by payroll and utilities. Reopening too late means you may lose your customer base or not have enough money to survive in the interim. Consequently, the choice of when to reopen is entirely contingent on your situation. Don't be badgered. Think it through and keep watching what is going on in the business environment.

9. MONITOR THE BUSINESS CLOSELY

If you reopen your business, keep in mind that most small business losses do not occur during the event, but after it. The real losses start to show up if the cash register isn't ringing at the same rate as before the disaster and when the business owner continues to pump money into the business, hoping it will come back to what it was. We have seen scores of business people who struggled to bring their business back following a disaster, only to learn they have wasted all their savings, credit, and energy on a business that will never pay off.

Here is the key point. Monitor your business receipts, costs, and profit following your reopening. Compare them with the same periods before the event. Find out what's happening to your customers and suppliers. If your business is dependent on other businesses around you to bring traffic, find out what is happening to those businesses. Second, if there is damage to the structure and you lease it, find out how soon the landlord will have the building and grounds fully restored.

Businesses often lose a lot during the disaster. Equipment breaks, inventory is lost, the building that houses the business is damaged, and records are lost. These are usually big losses, but the larger losses for many businesses come during what they think is the recovery period. Some firms do just fine once they clean up the debris. They can still produce their goods or services, their customer base is still intact, and they can compete successfully for customer dollars. However, when you cannot produce the goods or services, or when the customers stop buying what you have to sell, or tough new competition appears, then the bleeding that starts with the disaster event continues. For many, the bleeding continues until the owner is out of assets, credit, and hope, and filled with despair and physical and mental exhaustion. Then they close.

We have seen dozens of owners of what we call "dead businesses walking" and what the sociologists call "permanently failed businesses." The business looks like it is there. The building is there, along with the owner and some things to sell, but no one is buying. No one has bought for a long time and no one is going to buy. The business is dead; it just hasn't fallen over yet.

10. IDENTIFY ON-GOING PROBLEMS AND 11. REEVALUATE YOUR BUSINESS PLAN

If, after you reopen, your business encounters problems that may be related to the disaster, then it makes sense to reevaluate your business plan. We interviewed lots of business people who decided they could "play through the pain." That is, they thought that what was a serious, long-term problem with their business could be overcome by just doing more of the same. That almost never works.

If your business was reasonably good before the event, and you experience significant problems once you reopen after the disaster, chances are that the disaster has something to do with creating the problems. Try to figure out what is causing your problems. Get professional help with the analysis.

ILLUSTRATIVE STORIES OF REAL BUSINESSES FOLLOWING EXTREME EVENTS

INTRODUCTION

This section is comprised of several of the stories we heard from business owners who were affected by a natural disaster. They told us about experiences and they also told us about things that emotionally involved them in their experiences. For many, these emotionally conditioned experiences remain vivid years after the related events. "January 17th everything was great. The next day my world collapsed." The emotion and stress usually started with the impending disaster, and carried through the event and afterward as the effects and consequences of the disaster event played out. After a time most people learned to live with the stress. They learned to adapt as their lives changed.

What Can You Learn from These Stories?

In some cases, your own experiences will be validated. But, for most of us, these stories provide an opportunity to "live through" some of the disaster-related experiences of small business owners and entrepreneurs. More important, we can reflect on what happened to people who owned and operated businesses before, during, and after a disaster event and learn what to expect, when and how to prepare for those expectations, what to do during an event, where to find help during and after an event, and what must be done to continue and to move on.

Very useful "what to do/how to prepare" information is available, but there is little enthusiasm for taking actions or spending money on events that are forecast as probabilities. Recently a local official told us "We haven't prepared much because we don't think terrorism will happen here. We can't afford to do much anyway." Information, checklists, and guidelines are available through many organizations and web sites. They can help you prepare for and survive a disaster. The stories told here can help you relate to, foresee, and prepare for what could happen to you, your family, and your business after a disaster.

The "primary themes" and "lessons learned" came from the stories included here and many more not included. What you learn from these stories will depend, to a great extent, on your own experience, perspective, insight, and ability to relate to the entrepreneurs and business owners who shared important periods of their lives with us.

Elements of Success

Every (almost every) story we heard had elements of success, but for most success was not the primary consequence of a disaster event. Luck was sometimes mistaken for success or contributed significantly to "successful" outcomes. Among the amazing and at the same time discouraging things we heard in our interviews was about the resiliency and resolve people showed in putting their lives and sometimes businesses back together.

Not everybody set reestablishing their pre-disaster business as a priority. Roger asked himself "is this what I want to be doing the rest of my life?" His answer prompted other questions. The people who consciously or subconsciously limited their option never asked these questions. The measure of "success" for most people varied with their expectations.

The local newspaper headlines featured the reopening of a well-respected, regionally famous restaurant at a new location within months of being flooded after the adjacent creek had overflowed its banks. The flood had submerged the facility in muddy water. At the new location, business was good, quite good. The relocation and restart of business were by all measures a success, but it was not the same. The restaurant down by the creek had become a living legend over the years. The new restaurant, though it had the same menu, served the same food, and had essentially the same staff was not the place to "get good seafood down by the creek."

Everyone we talked with found (or tried to find) elements of success in their post-disaster business experience. For most people, successes, however great or little, provided hope and encouragement.

Each of the following five stories includes implicit and sometimes explicit elements of relative success. In the "Notes" following each story, one or more major issues or themes of the story is cited and elaborated, but there are more issues and themes in these stories than are presented in the "Notes." We hope these stories will trigger imaginative thinking in anybody who faces business risk associated with disaster events.

(Note that, while these stories are real, the business and individual names have been changed in order to protect the privacy of those involved.)

THE TERMINAL CAB COMPANY

For about three weeks after the flood, the company was shut down. Wesley and Winnie, the cab company owners, felt comparatively fortunate. They lived across the river in an area that was not significantly affected by the flood. After the water subsided and things began to dry out, they started taking business calls and delivery orders. They worked out of their house for about three months, but then the city closed them down because they were running a business in an area zoned "residential."

After the city closed them down, Wesley and Winnie had to make some decisions. They could move back to their original business site. They could try to sell the business. They could relocate to a new business site or location. They could close the business and move to South Florida.

They thought about it. They discussed it and rather quickly decided to move back to their original business site. The two buildings they operated from before the flood were damaged beyond repair. These buildings, which had served as an office and an auto repair facility, had to be torn down. A double concrete slab is all that was left of the Terminal Cab Company's original business site. Wesley and Winnie bought a trailer and operated with kerosene for a month. It took about a month before they could get electrical and water hookups; the local power and water facilities were also damaged by the flood.

Before the flood, along with their cab service, they sold used-cars and ran an auto repair service on their business site. During the flood, they lost five cabs and their entire inventory of used cars, a total of fifteen cars. Nine months after the flood the cab business was up to about one-half the business they had before the flood. The drop in business was mainly because the town was completely evacuated during the flood and nine months later few people had returned to the town. The former residents were living with relatives elsewhere or in the FEMA trailer parks several miles away. Before the flood, they had seven contracts with companies for taking people to and from work, "but now there is no one to take to work."

They had thirteen cabs driven by private (contract) drivers, before being flooded out. Now they are lucky if they can keep three cabs going, even with deliveries. They also lost all their radios, which are very expensive to replace. There is another cab company across town and it may be doing a little better because the areas it services are pretty well built back.

Terminal Cab Company received no direct financial help from the state. (They decided not to take out an SBA loan even though the state paid the interest on SBA loans for three years.) They did receive $300 from the local government. After nine months, they were finally doing enough business to pay their mortgage, but they hadn't yet replaced their business cards that were lost in the flood.

Notes for the Terminal Cab Company

This summary of Wesley and Winnie's story does not recount the physical and psychological stress, the emotion, the work and effort or the many relational things they lived through immediately before during and after the flood. This summary does not describe the tone of voice, the hesitation, the breathing, the sighs, the gestures, the facial expressions, the repetition, and the many other things we saw and heard beyond the words they used to tell their story. In addition, this story, as with all the stories we heard, did not have an ending.

Every entrepreneur and business owner we talked with acknowledged some aspect of the stress and emotions they experienced during and after the disaster event. However, most of them (including Wesley and Winnie), appeared to think that their emotional state was not a major factor in the business decisions they made subsequent to the event.

We talked primarily with Winnie – Wesley had to make a pick-up and delivery so he left shortly after we arrived. In the nine months between the disaster event and our arrival, it is very likely Winnie had told parts or most of their story to reporters, officials, researchers, friends, neighbors, acquaintances, and anybody else who asked about their experiences. It is also likely that she became increasingly adept at telling their story with practice.

Some of what she told us we had heard, occasionally in the same words, from others before and after we talked with Winnie. As she recounted her story, several details stood out as important, recurring facts. Other details led to shared inferences. These facts and inferences include:

- They went back into business as quickly as they could.
- They returned to the original business site.
- Many of their pre-disaster customers had temporarily, or permanently, left the area.
- They used personal funds rather than a loan to

restart their business.

- They did not seriously consider the likelihood of future flooding at their location.
- They learned that laws and ordinances are enforced.

These and other themes recur though the stories we heard. Applying these themes and experiences to different circumstances, disasters, businesses, and people is problematic, though important. We feel that learning from others' experiences is cost-effective and sensible.

ASSUMING THINGS WILL GET "BACK TO NORMAL"

One of the things the owner of Ralph's Builders Supply did right was to change his insurance coverage and insurance company just weeks before the flood hit. His insurance agent suggested he change companies because of the cost of fire coverage (his business had previously experienced two fires). Though the insurance was $1,000 more a year even after he changed companies, he was happy he had made the change. The company he had previously been with went broke as the result of the storms.

> In the aftermath of a disaster . . . it is important to help take care of employees. They need help with all aspects of recovery. If they can't get back on their feet relatively quickly, it will affect the recovery of the business and maybe even its ability to come back at all. It is important to the survival of a business.

In the days after the storm, Ralph's gave away an estimated $100,000 worth of building supplies. Over the next year and one-half, Ralph's business grew steadily, as if it were a start-up business. The firm did more business in that year and one-half selling out of a shed after the storm than it did in the next seven years out of a rebuilt facility. The new structure is built to comply with or exceed the requirements of all the new building codes.

Over the years after the storm, 10 area builder's supply companies went out of business including both local outlets of national chains and a locally-based company that had been in business 60 years. (The builders and contractors who came in after the storm to rebuild the area did not use local suppliers.)

Ralph's business was established in 1970. When the storm hit, it had 18 longtime employees. After the storm, 14 of the long-term employees packed up and left the area.

The storm had devastated the area. Housing had to be rebuilt. Federal housing grants were used to build predominantly low-income housing to replace the storm-damaged housing. Immediately after the storm, the area demographics began to change and they have continued to change from storm-related and other influences in the years following the storm.

The insurance policy that Ralph's Builders Supply owner had taken out to cover his business helped him get his business up and running again, but he also had to take out a commercial bank loan to rebuild his facility. Before the disaster, he had owned the buildings and facilities from which he operated; the bank owns his new building.

One of the lessons Ralph felt he learned in the aftermath of the disaster was that it is important to help take care of employees. They need a place to live. They need help with all aspects of recovery. If they don't have a place to live; if they don't have transportation; if they can't get back on their feet relatively quickly, it will affect the recovery of the business and maybe even its ability to come back at all. Helping employees is important to the survival of a business.

He also recommended that a business have business interruption insurance and accounts receivable insurance.

Notes on Assuming Things Will Get "Back to Normal"

Ralph's business has never returned to pre-disaster sales levels. He told us "whatever you had, you have to do it better when you redo it for your mental well being." He rebuilt his facility and in doing so, it was structurally better than it had been before the storm. An important consequence was that even with relatively good insurance and an insurance company that did not fail, he needed additional financing to get his business up and running.

In part, as the result of the loan, his cash flow became critical. Along the way, he considered selling personal assets to stabilize the business cash flow.

As did many of the business owners and entrepreneurs we talk with, he got his business up and running as quickly as he could. He returned to its original business site, and he used personal funds in addition to insurance *proceeds and loans to re-establish his business.*

None of the things Ralph's owner did were inherently wrong. Rather, they may have been the appropriate, or the right things, to do. However, these actions were entered into largely without serious forethought, analysis, or planning.

The fact that so many people left the area soon after the event and the impact on local business was not fully accounted for in Ralph's "business recovery" process. The feeling that things would get back to "normal" drove the entire "recovery" process. Many things changed after the disaster – the "normal" market after the disaster was different from the "normal" market before the disaster. The hope or confidence that things would soon get back to normal belies the reality of the post disaster dynamics.

The last time we talked with Ralph, more than six years after the disaster, he was wondering if he was "going to make it."

WHERE ARE THE CUSTOMERS?

Bill had been in business for years before the flood and he was making a living. He ran an auto repair business out of a fairly large steel building at a site about 100 yards from the river. Few of the townspeople could remember the last time the river overflowed its bank. The river hadn't flooded for a long time and the levee that was built after the last flood many years earlier was assurance for the town's people that they were protected from ever having a similar disaster again.

Even with warnings, the townspeople were not fully convinced they would experience a major flood and if it did come, there wasn't much they could do about it. After all, "It's an act of God." Bill and many of the other business people just waited to see what would happen as the flood crest moved downstream, closer and closer to town. Inevitably the flooding started. It marked buildings at 15 or more feet while submerging others. Bill lived some distance from town, in an area not affected by the flooding. It was something of a surprise and shock to him when he was finally allowed back in town to view the damage to his business.

Bill was able to reopen his business before the competition because the steel building in which his business was located incurred very little structural damage from the flood. However, the cleaning-up, fixing-up, replacing damaged equipment, finding the money and loans to pay the bills, took months. During this time, his employees, which included his son-in-law, found work elsewhere and left the area. He was left to do any repair work himself with the help of one part-time mechanic. Unfortunately, he didn't need much help. Even though he was the first repair shop back in business after the flood, there was little to do. The town had been evacuated and people were slow to return to their destroyed and damaged homes and property.

He had very few customers in the more than nine months following the flood. There was nothing to repair. He had no money and his family was "emotionally stranded" as a direct consequence of the flooding. Most of each day he spent in his office at the repair shop talking with one or two old friends who stopped by regularly. Every day he waited for a customer.

Notes on Where are the Customers?

Though people have attributed occurrences and consequences of disaster events to God or gods for longer than history remembers, Bill's circumstances very likely evolved from a network of decisions, indecisions, actions, and inaction on the part of him, the community, the various levels of government, and other unidentified factors.

Identifying root causes and contributing causes often serves as an outlet for blame, more important, it provides a ground for "lessons learned" which provide an important source for appropriate future decisions and action. Bill felt he did all he could in the wake of "God's will."

He was running out of money and hope. His family was running out of money and patience. Still Bill hoped. He hoped his customers would return soon, he hoped business would pick up so he didn't have to finance his cash flow with family savings. He hoped his family would get back together and his son-in-law would come back to work with him. Every day a few friends would drop by his business and talk about his problems and hopes. Every day his friends sat on the old couch in his office; he sat on the swivel chair behind his wooden desk.

The fact that his steel building incurred very little damage may have been as much misfortune as it was good fortune. It allowed him to get his business up and running before any of his local competitors. The problem was that he was up and running months before any of his customers, any customers, returned to their homes. Most of *the homes in the community were uninhabitable after the flood and had to be torn down and completely rebuilt before anybody could move back to the community.*

"IT'S GOING TO GET BETTER – SOMEDAY"

The gas station was open for only three months before the flood forced them to close down. They moved back in and reopened their business nearly nine months later for the second time in less than a year.

The "road back" produced a variety of challenges and a bit of good fortune. They tested the structural integrity and found the building did not experience any structural damage. However, they did have to gut the entire building and refinish it.

Randy and his partner had a bank loan for the initial mortgage and startup. Then, after the flood, they received a loan for more than a half million dollars at 4% interest rate through the SBA. The city and county provided no help for small business, but the state provided a grant to offset the SBA interest costs for three years.

Just before the flooding, they had purchased and received 62,000 gallons of fuel. After the flood, the EPA helped evaluate the fuel and determined what fuel had to be returned to the supplier. (The gas storage tanks were above ground). Though they returned a significant amount of the fuel because it was contaminated, they were not given any credit or discount. They had to pay the bill for the full 62,000 gallons.

They also had to pay their initial bank loan during the nearly nine months they were closed. There were no grace periods or forgiveness. The owners had to draw heavily from their personal savings to pay business bills during this period.

Notes on "It's Going to Get Better – Someday"

Hope and confidence exude when an entrepreneur opens a new business. When the planning, preparation, locating, financing, building, and all the things that go with opening a new business come together and the "open for business sign" goes up it is exciting for everyone who played a role in the start-up process. It can be particularly exhilarating for the owner(s)

To have a new business flooded, the entire facility submerged, when the nearby river overflows the levee built to protect the adjacent community, it can be devastating. Overnight joy turned to anguish for Randy and his partner:

- They went back into business as quickly as they could.
- They returned to the original business site.
- Many of their pre-disaster customers had temporarily, or permanently, left the area.
- They used personal funds rather than a loan to restart their business.
- They did not seriously consider the likelihood of future flooding at their location.
- They learned that laws and ordinances are enforced.

Again, the things they did were not inherently right or wrong, good or bad. Usually, the utility of related actions and decisions plays out in consequences.

For Randy and his partner, the consequences of their action and decisions play out as, in part, successes and failures in the weeks, months, and years following the flood. If it does not flood again in a month, a year, fifty years, not relocating the business is a decision that becomes increasingly successful as time passes.

Most of the other circumstances of Randy and his partner's post-disaster decisions and actions play out similarly over various time lines depending on for example: how long it takes for customers to return or new customers to move in; how much personal money must be invested before bankruptcy or payback; how long cash flow is negative and before they run out of money; and so on. In each of these circumstances, the time component of success is important, if not critical.

The consequences of not having adequate insurance does not doom Randy and his partner's attempt to "come back" after the flood, but it sure complicates things. As a result, they ended up paying for inventory they no longer had as well as the inventory they needed to open their business for the second time in a year.

They have a mortgage, but much of what was being financed through the mortgage was destroyed by the flood and ended up being replaced, the replacements financed through a new loan.

Randy and his partner successfully restarted their business, but ultimately their success will be incrementally measured in the coming years as they recoup their personal investments, pay off the initial mortgage, pay off their new loan, and generate a positive cash flow.

WHEN CAN I RETIRE?

"It's almost three years since the earthquake hit and I'm still not doing the business I used to. I should have retired the day I turned 65, but I felt good, business had really picked up, and I only had one year left on my home mortgage. Now here I am at 68, with a second mortgage, dwindling savings, and a business that is slowly dying."

His retirement was one of the things Henry dwelt on when we visited him three years ago. This visit, six years after the earthquake, he mentioned his retirement only once. All he said is that he would retire before he turned 73. This visit, he talked about "looking to the future."

After the earthquake, Henry never once thought about closing his business. He has been in the dry-cleaning business since 1954 and at his current location from the time the strip mall opened, 17 years ago. Over the years, he established a reputation for quality, personalized work and even though his prices were a little higher than other local cleaners, he had established a loyal customer base over the years. He knows every one of his customers by name, what they do for a living, and what is happening with their families.

The earthquake interrupted his business for two weeks while the strip mall he is located in was repaired. Since then (the past six years), Henry has been working eight plus hours a day, six days a week, with one week off over the Labor Day holiday each year. With the decrease in business since the earthquake, he has saved a little by not hiring a counter person. However, the drop off in business wasn't all from the earthquake. Other things have also contributed to declining revenue.

A few years before the earthquake, a large defense contractor closed a nearby engineering facility and plant and moved the operation out of state. Many of the technical and professional people that worked at the plant were transferred to other company facilities or they left the area in search of new jobs. The impact of the plant closing was already being felt by some local businesses before the earthquake hit, but after the earthquake even more people left the area. Some left temporarily, while their homes or apartments were being fixed-up or rebuilt. Others left permanently, out of anxiety and perhaps frustration. They moved away to avoid the continuing threat of earthquakes and their consequences. This exodus exacerbated the already decreasing customer base of local businesses.

There was another phenomenon, which has significantly affected the dry-cleaning industry, nationwide, before and, increasingly, after the earthquake. The relaxing of dress codes, dress-down Fridays, and the impact of "business casual dress" meant that suits, dresses, and dress shirts needed cleaning and laundering less often. The net result has been fewer customers bringing in less dry cleaning.

In spite of these known issues, Henry remained optimistic in the first few years after the earthquake. As the red and yellow-tagged homes and apartments were repaired, some of the former residents returned, but more often new people moved into the area. The ethnic and economic make-up changed significantly in the years following the earthquake. During this time the customer base increased significantly, but so did the competition.

Before the earthquake, Henry was competing with three dry cleaners within a half-mile radius of his location. Now, six years later, he has eight dry cleaners to compete with in the same local area. His old customers have been very loyal, but he has had difficulty drawing in new customers from the rebuilt homes and apartments in the local area.

He does some advertising in the local shopping newspapers and even tried some radio advertising, each with limited success. Most of the competition uses coupons of some sort and they all have lower prices to start with, but Henry is reluctant to use coupons and feels the personalized, quality service he provides is worth the little extra he charges.

Even with the increased competition and a smaller customer base, Henry has been able to pay himself a salary and still clear enough to pay the second mortgage on his home. The equity built up in his business was earmarked for his retirement. He had hoped to sell the businesses and invest the proceeds, expecting this to be a significant part of his retirement. But things didn't work according to plan. Even though new competition was popping about all around him, nobody was interested in buying his business.

In the year following the disaster, Henry had looked at upgrading his facility and equipment, but he didn't have the cash to do it, nor did he want to take out a government loan that required him to put up everything he owned as collateral. However, after four years of struggling, hanging on, and getting older he decided he had to do something soon. At nearly 70 years old, he decided he had to "start looking to the future."

Henry decided to update his dry-cleaning equipment. Environmental and workplace laws and regulations made his current equipment obsolete. He also hoped to decrease operational costs by increasing capacity and efficiency with state-of-the-art equipment. The cleaning system he decided on exceeds OSHA and EPA standards.

With this new equipment, Henry was sure he could make a big dent in his operating costs, but more importantly, he felt that the business, with state-of-the-art equipment, would become more attractive to potential buyers. Henry knew that if he was going to retire in the next two years, he had to get a significant part of his equity out of the business.

To finance the equipment purchase, Henry was able to get a state-sponsored loan at a 5.25 percent interest rate. It took four months to get through the paper work. Once that was finished, he qualified immediately. We last talked with Henry, two years after he installed a new drying cleaning process. He told us he would probably be retired in another couple of years.

Notes on When Can I Retire?

Henry's business is located in an area that was economically impacted by the closing of a large defense contractor's facility. Because of the closing, former defense contractor employees had to find new jobs in the area or they had to relocate. This changed the customer base for many local businesses.

Within a couple years of the plant closing, a major earthquake hit the area, which exacerbated an already difficult situation for small businesses, particularly service businesses and retailers. Henry was near retirement at the time of the earthquake, but the earthquake interrupted his business and the lives of his customers.

His plans to sell his dry-cleaning business and to use the proceeds of the sale to finance his retirement were put on hold after the earthquake. Ten years later, he is still running the business and still hoping to find a buyer so he can retire. We had heard "retirement stories" at every site we visited, occasionally in very similar circumstances. Each time we talked with Henry, increasingly his viewpoint changed from looking back to looking forward. He was able to again look forward to his retirement, long delayed. Details that recur in many of the stories we heard and which stand out here include:

- Not being prepared for the consequences of significant disaster events.
- Not being aware of available options.
- Counting 100 percent on business equity to finance retirement.
- Not being insured (an inference, since savings and a second mortgage were used to finance restarting the business).
- Thinking things would get back to normal (for years, looking to the past rather than the future).
- Taking positive action to make the business attractive to potential buyers.
- Not willing (able) to compete effectively with new competition.

The case is not just about a businessman who is working long after he had planned on retiring. It is about a businessman who, over more than 40 years, made significant business, financial, and personal decisions, many of which contributed in various ways to his current circumstance. Many (if not all) the business decisions made today have future consequences, and some of the key decisions that influenced this case were made over the 40 or more years Henry was in business. For example, early in his career, Henry made (or did not make) decisions about how he would finance his retirement, and throughout his career, he made or avoided making decisions about disaster insurance coverage. ◆

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